



# THE UNIVERSITY *of* EDINBURGH

<b>Title</b>	Study of grammatical functions in English and other languages
<b>Author</b>	Anderson, John Mathieson
<b>Qualification</b>	PhD
<b>Year</b>	1972

Thesis scanned from best copy available: may contain faint or blurred text, and/or cropped or missing pages.

## Digitisation notes:

- Page 130 missing in original.

A STUDY OF GRAMMATICAL FUNCTIONS

IN

ENGLISH AND OTHER LANGUAGES

by

John Mathieson Anderson

Submitted for the degree of PH.D

University of Edinburgh

1972





## SUMMARY

ch. 1. The positing of functional nodes (like locative) in underlying representations is defended, as a preliminary to a sketch of the grammatical framework utilised and in part justified in the present work. Underlying (i.e. semantic) representations involve, at least in part, dependency configurations which are mapped into surface syntactic structures by transformational rules. Finally, the localist and anti-localist positions on functions are contrasted: the localist hypothesis claims that all functions can be reduced to notions of location and direction.

ch. 2. The functional elements nominative (the unmarked function) and ergative (the agent) and the semantic feature stative are introduced and their syntax discussed, particularly in relation to imperativization, progressive aspect and certain adverbials. The derivation of subjects and objects (including passivization), and the morphological reflexes of the underlying functions is discussed. 'Adjectives' and 'verbs' are subsumed as predicates.

ch. 3. A distinction is drawn between two kinds of predicate which take an ergative and a nominative, causatives like kill (transitive) and go (intransitive) and non-causatives like read (transitive) and work (intransitive). Clauses of result are interpreted as involving a sub-type of causative.

ch. 4. The functions locative and ablative are discussed, and their interaction with the other two

functions examined. It is argued that directional clauses are clauses in which locative and ablative are immediately dependent on the same predicate. Locative may be combined with nominative (as underlying the subject in John is hungry) and, in causative clauses, with ergative. Subjectivization and objectivization of locative and ablative are formulated in a preliminary way. It is observed that ergative and locative or ablative can occur as immediate dependents of the same predicate only if that predicate is causative. 'Path' prepositions like through are interpreted as manifesting a node which is <sup>a</sup> combination of locative and ablative.

ch. 5. 'Affective' or 'psychological' predicates, it is argued, involve an 'abstract' locative containing an animate nominal; so too 'possessive' predicates. These locatives may be marked with the by preposition associated with ergatives. Existential clauses are locative clauses in which the locative nominal is 'existence'. The 'indirect object' with verbs like sell is interpreted as an objectivized locative, and pairs like buy and sell are alternative causativizations of a basically directional clause. Non-causative abstract directional predicates like owe/due and 'performative' directionals like offer, accept are discussed. It is proposed that verbs like help show incorporation of the nominative phrase into the predicate (cf. give help); and a more formal characterization of such processes is formulated.

ch. 6. Subjectivization and objectivization of locatives is formulated as nominativization, and this and other evidence leads to a proposal that functional nodes be introduced as an unordered set, and subsequently 'sequenced'. Locative and ablative become subject or object only by being nominativized or ergativized. The case labels are shown to be non-atomic; they represent complex symbols marked for  $\pm$  locative and  $\pm$  negative. Causatives, including lexical causatives, are interpreted as involving an ergative clause superordinate to another clause. Clauses of result contain a causative above an existential. 'Raising' of an argument is discussed, and there is formulated a principle governing raising when two arguments are involved (as with passives, have-structures like the table has a book on it, dative of interest predications and sentences involving buy/sell etc.).

ch. 7. Temporal adverbials are discussed as locatives containing a certain subset of nouns, and are proposed as the source for verbal tense. On the basis of evidence from a wide range of languages it is argued that progressive aspect (and contingency with nominal and adjectival predicates) is associated with an underlying structure in which a temporally limited existence is predicated of the 'event/state' denoted by the 'main verb' (or adjective/predicative nominal). Retrospective and Prospective aspect are given an analogous interpretation. Perfects are regarded as



involving a dual temporal reference; and a particular derivation for 'have' perfects is motivated.

ch. 8. The derivation of predicative nominals from predicates is discussed, and it is proposed that all full lexical nouns derive from the conjunction of a referentially indexed variable (N) and a dependent predicate with which is associated its semantic content. The role of 'secondary predications' -- parts of the pre-transformational representational introduced not as semantically primitive but as a function of the presence of certain other subconfigurations -- is discussed, and related to English 'periphrastic do' and the 'have' perfect. It is proposed that nominative, locative and ablative may be adnominal as well as adverbial. An interpretation of quantifiers as taking an adnominal ablative (partitive) is justified in relation to the higher predicate analysis of Lakoff.

ch. 9. A brief review of the evidence for the localist hypothesis surveyed in the preceding chapters is presented. It is claimed that the functional elements proposed are universal; but <sup>it</sup> is argued that a (putative) universal status does not as such constitute evidence for the 'innateness' of the elements concerned.

The research work reported on in what follows represents an attempt to formulate something of the semantic character and the syntactic reflexes of one set of putative substantive universals of language, viz. the set of grammatical functions. In the course of this investigation I have been led to elaborate afresh a localist view of these -- i.e. an exploration of the viability of a tradition concerning grammatical functions whose origination we can attribute (with much more certainty than hitherto, thanks to some recent work of Robins) to the thirteenth-fourteenth century Byzantine mathematician, grammarian and theologian Maximus Planudes. (Such a combination of interests now seems once again to be a necessary pre-requisite for grammatical research!) I try to show in some detail in a number of instances that underlying, or semantic, functions can plausibly be described with reference to only four basic functions, themselves distinguished in terms of the notions of location and direction proposed as universally sufficient by the localists: further functional distinctions are provided for by combinations of the basic ones or by (possibly superficially reduced) constructions involving case phrases containing another case phrase (beside, à côté de). The localistic analysis is further extended in outline to certain other areas of the grammar, and its possible status as a major component in the basis for lexical decomposition in general is envisaged.

Accounts of some of the research reported on here have been published in the following works of mine listed in the bibliography:

1968a, 1969b, 1970b, 1971a, 1971c, 1971d. Further accounts are to appear as (parts of): forthcoming a, forthcoming b.

I have included in the bibliography only those works to which explicit reference is made in the text. But its range will give some idea of my reliance on the work of others. The extent to which his published work is cited will also perhaps give some idea of my debt to my supervisor, John Lyons. I am grateful to him and to Angus McIntosh for their help and encouragement. I am also indebted for discussion, comments and criticism to a number of friends and colleagues, particularly Keith Allan, Keith Brown, Paul van Buren, Maureen Clark, Richard Hogg, Charles Jones, Roger Lass, Norman Macleod, Jim Miller, Hermann Palsson, Jane Robinson, John Sinclair, James Peter Thorne, David Tittensor and David Young. For their patience, diligence and skill I express my gratitude to Jean Beaumont, Doris Heron and Freda Redpath, who undertook the typing of the thesis. I must finally admit to the indispensable assistance of my wife and daughters, that inexhaustible collective source of illuminatingly 'anomalous' English.

## CONTENTS

iii

### Preface

### PART I

ch. 1	Introduction	1
1.1	On the notion 'functional category'	1
1.2	A sketch of the grammar	16
1.3	Remarks on the localist hypothesis	39

### PART II

ch. 2	Nominative and ergative	
2.1	Preliminaries	54
2.2	Ergative clauses	64
2.3	The morphological representation of erg and nom in various languages	72
2.4	Stative ergative clauses	78
2.5	Conclusion	85
ch. 3	Causatives	
3.1	Two kinds of 'transitive' verb	88
3.2	'Intransitive' and 'adjectival' causatives	99
3.3	Clauses of result	102
3.4	Causativization of 'nominal' clauses	104
ch. 4	Locative and ablative	
4.1	Locatives	108
4.2	Stative locative clauses	112
4.3	Clauses with copula + locative	113
4.4	Subjectivization and objectivization of locatives	119
4.5	Reflexive and ergative locatives	127
4.6	Ablatives	133



4.7	Stative directional clauses	140
4.8	Synopsis	142
4.9	'Reflexive' directional clauses	145
PART III		
ch. 5	Datives	
5.1	Preliminaries	150
5.2	Clauses with a type of abstract locative	150
5.3	Possessive and existential clauses	160
5.4	Abstract direction	175
5.5	A type of abstract directional clause	176
5.7	Some non-causative directional clauses	191
5.8	Some verbalizations, and a proposal for lexicalization	194
5.9	Remarks on some 'performative' verbs	204
ch. 6	Causatives and the X-principle	
6.1	Sequencing	211
6.2	Transitivity and direction	237
6.3	The structure of causatives	245
6.4	'Lexical' causatives	254
6.5	Inter-predicate constraints	265
6.6	The grammar of 'buying' and 'selling'	267
6.7	The X-principle	271
6.8	'Buying' and 'selling' again	287
ch. 7	Temporals and aspect	
7.1	The analysis of tense	293
7.2	Darrigol and the analysis of aspect	301
7.3	Markers of aspect	303
7.4	Further informal remarks on tense and aspect	327

v

7.5	Darrigol's hypothesis generalized	333
7.6	Darrigol's hypothesis revised	347
ch. 8	Notes on nouns	
8.1	Predicate nominals	365
8.2	Secondary predications and stativity	376
8.3	The derivation of nouns	391
8.4	Supra-nominal nouns, and quantifiers	398
PART IV		
ch. 9	Conclusion	430
PART V		
Bibliography		

109 2520

BOW

EGG CLOTH



PART I

## 1. Introduction

### 1.1 On the notion 'functional category'.

I think it is not merely perverse (or an instance of, perhaps misguided, sympathy) to choose to initiate this study with a quotation from a scholar who is known to all too many contemporary linguists primarily (only?) as 'Jespersen's favourite bad guy'. For we shall find, I trust, that his brief description of the use by the Greco-Latin grammarians of the notion of 'case' ('casus', 'πρωσεις') not only provides a convenient starting point for what I want to discuss but also illustrates how the various disputes and misunderstandings over the use of the term may have arisen.

- (1) What were the distinguishing features of these cases? They differed from one another in two respects: they always differed in meaning, and they generally (though not always) differed in form. The first difference may be called 'functional' and the second 'morphological'. Now it is evident that the ancient grammarians took account of both these features. Their terms denoting the several cases were functional terms applied to the forms of words . . .

(Sonnenschein, 1927: 2)

Sonnenschein thus outlines a rather tagmeme-like view of case, a union of form and function. However, I shall take it that this relationship is simply one of realization: the form is simply the phonological item that manifests a functional



category or (what I shall henceforth refer to as) case. Case forms can be inflexions, prepositions or postpositions: these are all manifestations of cases, which I am thus interpreting as categories indicating the function of nominals in the predications to which they belong: they indicate the mode of participation of the nominal they are associated with (cf. e.g. Lombard, 1929).

We shall refine this characterization as the discussion proceeds. But it will be already clear that there is a particular controversy that must be broached before we can so proceed. And this arises from my insistence on the categorial status of cases or functions. This is in direct contradiction to Chomsky's (1965: 73) claim that 'it is clear that information concerning grammatical functions . . . can be extracted directly from the rewriting rules of the base, without any necessity for ad hoc extensions and elaborations of these rules to provide specific mention of grammatical function'. I shall now attempt to show that Chomsky's characterization of function (as used, he claims (1965: ch. 2, par. 1), in 'traditional grammar') is unhistorical, inconsistent, unmotivated and (in his own terms) irrelevant. Let us consider in some detail his discussion of this question.

Chomsky (1965: 63) announces that he will begin (as 'a heuristic procedure') with 'a careful analysis of the kind of information presented in traditional grammars'. This he fails to do: no analysis of one or more 'traditional grammars' is presented, and indeed no 'traditional grammar' is even referred to. I suspect this is a careful exercise in the deployment of

referential opacity as an instrument of argument: what we are given is not a 'heuristic procedure' but a specious appeal to authority. Chomsky does present three sets of information which he claims a 'traditional grammar' might (should?) contain with respect to the sentence Sincerity may frighten the boy: one comprising statements concerning constituency (what Chomsky calls 'categorization'); the second concerning 'grammatical relations'; and the third concerning context-free and contextually determined subcategorization (of nouns and verbs). No justification is offered for the distribution of the information into these three sets; still less are the individual assignments given any motivation. Some of the terms in (1), for instance, are functional as well as categorial - as 'auxiliary', 'determiner'. We shall return to this question in more detail in a moment. However, even if we concede that some 'traditional grammars' may contain something like this information (which is highly possible, given the lack of referential or definitional specification of the class of 'traditional grammars'), Chomsky's transposition of it to the sphere of 'deep structure' is quite illegitimate. The term 'subject' (tout court), for example, in most non-Chomskyan grammars that I am aware of is not used with reference to configurations which are anything like Chomsky's deep structures: the two words preceding the verb be in The Americans were slaughtered are the subject of the sentence. The usage of a scholar like Scheurweghs (1959) seems to me not untypical of 'the tradition' in this respect. Other terms like 'logical

subject', 'psychological subject', 'subject of the action' have been used to refer to various (more abstract?) functions.<sup>1</sup> But these, like 'deep subject', seem to be begging the following question. In what respect do these functions (given that they have some legitimate status) show a similarity to the 'traditional' notion of subject of the sentence, such as to warrant referring to them as 'subjects' of some sort? Whatever the status of these notions (there is certainly no 'traditional' agreed position), Chomsky's application of the term 'subject' as if it were highly traditional to certain pre-surface configurations involves a distortion of historical fact.

Let us note further, in passing, that these configurations are asserted to be characteristic of a level (of 'deep syntactic structure') whose systematic status is in question. Certainly, no evidence which would support the claim that such a level (as

1. Cf. the distinctions discussed in terms of different kinds of 'subject' in the tradition represented by, e.g. Paul, 1886: ch. 16; von der Gabelentz, 1891: 348-57; Wundt, 1900: ch. 7, par. 3; or, more recently, accounts like those in Bolinger, 1952; Hatcher, 1956; Koch, 1965; Uhliřová, 1966; Halliday, 1967: par. 4; Lyons, 1968a: par. 8.1.2; Kirkwood, 1969; Chomsky, 1969b; and the numerous works initiated by Mathesius concerned with 'functional sentence perspective' - e.g. Mathesius, 1929, 1964; Daneš & Vachek, 1964: 22; Firbas, 1964; Daneš, 1964; Sgall, 1967; etc. For earlier studies, see e.g. the references in Hjelmslev, 1928: par. 30.



distinct from semantic structure) is empirically well-motivated is provided by Chomsky (1965). It will be shown below (in ch. 5) that a recent attempt to develop some such argument (Dougherty, 1970) is fundamentally misguided. Chomsky's use of the terms '(deep) subject' and '(deep) object' is thus both unhistorical and unmotivated. I shall now attempt to demonstrate that his notion of functional relation is also incoherent.

Chomsky is concerned that 'functional notions . . . are to be sharply distinguished from categorial notions . . . ' (1965: 68). But his 'illustrative fragment of the base component' (1965: 106-7) is a confusing mixture of terms that are apparently 'functional' and terms that are more obviously 'categorial'. Rule (57) (iii), for example, refers to the following symbols (among others): 'predicate', 'NP', 'Manner', 'Prep-phrase'. Chomsky would have us believe that the confusion is merely terminological: the distinction 'is not to be obscured by the occasional use of the same term for notions of both kinds' (1965: 68). This means then that, as well as with respect to NP, etc., functional relations can be defined with regard to 'Manner' or 'Time' or 'Frequency'. But are not these categories themselves 'relational', as much as are 'subject', etc? They differ in that they impose a subcategorization on the phrases that contract the relations: only certain phrases can indicate 'manner' or 'time'. But this does not constitute an argument that 'subject' is different in character from 'time': they are both nonetheless relational. Rather, I suggest, it is a reflexion of the fact that 'subject' and 'object' are neutralized functions (cf. particularly Fillmore, 1966a; Hofmann, 1969; Anderson, 1969b);

they are thus always derived. - - Various distinct underlying functions are conflated by the rules forming subjects and objects. Thus, Chomsky's notion of function applies only to neutralized functions; it is otherwise inadequate.

It seems to me that the problem arises largely as a result of Chomsky's insistence on the total distinctiveness of 'functional notions' and 'categorical notions'. It arises in the particular form I have described in the preceding paragraph because of Chomsky's untraditional and unsupported application of the notions of 'subject' and 'object' to 'deep structure'. But the fundamental reason is that the 'relational'/'categorical' dichotomy is a delusion. A moment's reflexion is sufficient to reveal this. Prepositions are presumably categorical (however they originate), but clearly they also, as has long been recognized, indicate a relation. Changing the preposition alters the relation. Verbs too, whatever else is involved, indicate a relation . . . as is perhaps most clearly seen in examples like Abraham resembles his brother. Grammatical categories vary in their relational content, but clearly relation is not in principle excluded. Admittedly, this is difficult to provide an account of in terms of the framework adopted by Chomsky. And this derives, it seems to me, from the identification of the notion of category with the notion of constituency. In the following section I shall argue that these relational characteristics of certain categories can be given a very natural interpretation with respect to the concept of dependency.

Let us however at this point dispose of what Chomsky alleges is an argument showing 'the impossibility of a categorical

interpretation of functional notions' (1965: 70). He adduces the examples reproduced in (2):

- (2) (a) John was persuaded by Bill to leave  
(b) John was persuaded by Bill to be examined  
(c) What disturbed John was being regarded as incompetent

and comments:

- (3) In [(2a)], John is simultaneously Object-of persuade (to leave) and Subject-of leave; in [(2b)], John is simultaneously Object-of persuade (to be examined) and Object-of examine; in [(2c)], John is simultaneously Object-of disturb, Object-of regard (as incompetent), and Subject-of the predication as incompetent.

He then concludes, without further argument, that 'in such cases as these, the impossibility of a categorial interpretation of functional notions becomes at once apparent!'. But these examples tell us nothing concerning whether or not underlying functions are to be given a categorial interpretation. Suppose we adopt Chomsky's concept of deep structure and the notions 'deep subject' and 'deep object', and moreover the (unargued) assignments he proposes in (3). What do the sentences in (2) show us? John in (2a) is 'simultaneously Object-of persuade (to leave) and Subject-of leave' only in the sense that 'corresponding to' John in the underlying structure are two distinct elements, one of which functions as object of persuade, the other as subject of leave. But this does not preclude a categorial interpretation of the underlying functions involved. And the same is true of



the other two examples. In each instance, there is more than one underlying function connected with John. These may or may not be given a categorial interpretation. Of course, as Chomsky is at pains to show (1965: 68-9), in the case of 'deep subject' and 'deep object', the functions can be deduced from a phrase-marker which does not include them; underlying phrase-markers including 'subject' as a node are redundant. But this is precisely a reflexion of the fact that 'subject' and 'object' are not among the set of underlying functions: they are, as I claimed above, neutralized functions; the configurations with respect to which subjects and objects are defined are derived.

Since Chomsky has shown that his notions of 'deep subject' and 'deep object' are redundant, the question arises as to what their role in the grammar might be (apart from satisfying his eccentric conceptions concerning what information a grammar should 'traditionally' contain). They are clearly not required by the rules of the semantic component. Since 'subject', for instance, is defined with respect to a certain subconfiguration in base phrase-markers, the projection rules of the semantic component (assuming, for the sake of exposition, that such exist) can also refer to these configurations in their application: the notion subject is at best an unnecessary intermediary. The same conclusion holds for any formulation of selectional restrictions (if these are conceived of as non-semantic) that is said to depend on such notions. Katz (1970: 222-6) asserts that Chomsky's notion of grammatical relation is not sufficiently constrained (as Chomsky (1965: 73) admits), and explicitly renders the determination of 'true grammatical relations' dependent on the

requirements of the semantic component. 'Information in the configurations of labelled bracketings beyond what is required to determine the grammatical relations of sub-constituents is irrelevant to specifying the way the semantic component combines their readings to provide a reading for the constituent of which they are subconstituents' (1970: 225-6). Once again, the definition of the relations is redundant: there exists a 'true grammatical relation' whenever a particular constituency relationship is required for the operation of semantic analysis. This is despite the fact that both Chomsky and Katz appear to be suggesting that there is some independent criterion on the basis of which one can recognize an 'irrelevant pseudo-relation' (Chomsky, 1965: 73). By definition, 'subject' is not referred to by any categorial rule of the base; nor do there appear to be (syntactic) transformational or phonological rules which presuppose it. To the formulation of all of these grammatical regularities, such definitions as Chomsky proposes are irrelevant. If 'deep subject' is to have any status, it must then apparently be as a semantic element in its own right. If such a status can be demonstrated, I shall have to somewhat modify what follows.

The preceding excursus has taken us rather far from the definition of Sonnenschein's that we started with. However, it did appear to be necessary to try to reveal how poorly supported is an anti-categorial position concerning functional relations that has been given such widespread tacit support. The truth is that there are no positive arguments for such a position which might restrain dissent from what seems to me to be an unwarranted orthodoxy. I hope at least to have shown that the notion

'functional category' is not inherently unreasonable; as I have indicated, I shall use the term case in such a sense. In so doing, I am isolating only part of Sonnenschein's conception. We shall see in the following two sections that much of the controversy over the use of the term case depends on whether emphasis is laid on the category or (some particular delimitation of) its realization.

## 1.2. A sketch of the grammar

In the present section, I want to sketch out a framework within which to discuss the cases, before discussing case as such. In connexion with this it is necessary to state (in a rather informal way, for our present purposes) certain assumptions upon which the following discussion in part depends, and some of which are in their turn supported to the extent that this discussion is fruitful. The first two sets of these I shall indeed discuss immediately; others can be noted in the course of developing our grammar. However, I think that the claim can justifiably be made that many of the arguments for a localist position are relatively independent of the particular grammatical framework suggested below.

I assume that the underlying case relations are a universal of language; further, that they are introduced within a set of 'base structures' in which the categorial elements and the configurations they assume are universal. That is (despite Chomsky, 1968: 57), I concur with Bach's (1968: 14) arguments for adopting initially the 'universalist-unitarian' hypothesis concerning the nature of the base. However, (if we regard the base as semantic) such a status is doubtful for many semantic features (despite



the fact that many idiosyncrasies can be accounted for in terms of 'lexicalization' - see below) unless perhaps certain distinctions are regarded as merely not being 'utilized' in some languages. Rather, then, features (as opposed to (underlying) categories - see below) are perhaps to be regarded as conforming to a cline of generality, with respect to which implicational statements (cf. e.g. Greenberg, 1963; Hjelmslev, 1935-7 -- see par. 1.3) can be made. Languages may be different with respect to how they divide up minimal semantic fields: cf. e.g. the examples of Weisgerber's discussed by Miller (1968: ch. 4). Also, the referential scope of semantic oppositions may vary. Languages otherwise differ primarily (apart from lexically and phonologically) in the particular transformational operations performed on these underlying representations.

Thus, although much of my argument will be concerned in detail with sets of examples from Contemporary English (that well-established source of linguistic universals), I shall feel free to draw on illustrations from other languages and from earlier stages of English, particularly where they make clear a distinction obscured superficially in English. Also assumed here is a diachronic interpretation of Hjelmslev's ('naturalness') hypothesis (1935: 104) that 'les lois qui dirigent les syncrétismes sont en rapport avec les lois dirigeant la structure du système', as one consequence of a view of linguistic change such as is developed by e.g. Kiparsky (1968) and Shane (1969), following and in reaction to Halle (1962). In particular, the facilitation of the predication of 'natural' syncretisms and shifts in representation is assumed to be evidence for a hypothesis. I shall



not in fact develop this aspect here, except perfunctorily (for example, in ch. 6), but it is intended that the argument could be so supplemented. For further discussion, see Anderson, forthcoming b.

The structures generated by the 'base-component' are to be regarded as semantic (or notional) representations, in the sense discussed in (for instance) the postscript to McCawley, 1968b. I shall therefore prefer here the term semantic sub-component (or semantics). These underlying semantic representations form the input to a 'transformational subcomponent' (what were called 'rules of realization' in Anderson, 1968a, 1969b) whose function is to correlate these representations with appropriate surface structures. It now seems not unreasonable to refer to this simply as the syntactic sub-component (or syntax). Together, these two sub-components form what one can refer to as a semantico-syntactic component (or simply 'grammatical component'?) whose output is the input to the phonological component (which it is not my concern to discuss here).<sup>1</sup> It is doubtful whether

1. For similar views and argumentations, see e.g. Hockett, 1966: 270-2; Chafe, 1967, 1968a, 1968b, 1970; Southworth, 1967; Langacker, 1967: chs. 4 & 5; Bach, 1968: 117-21; Postal, 1970; G.Lakoff, forthcoming.

Indeed, such a position seems to me a highly traditional one, in a tradition represented, for instance, by Jespersen, 1924: ch. 3, and only recently challenged (Katz & Postal, 1964; Chomsky, 1965) - though Chomsky later (1969b) appears to be arguing that no such challenge is necessarily intended.

*2nd ed. of Substr.*  
'deep structure' in Chomsky's sense<sup>1</sup> - see e.g. G. Lakoff, 1968: par. 0; forthcoming - can be justified (with respect to universal grammar) even as an intermediate unitary (systematic) level. Certainly, I shall assume underlying representations (with respect to which selectional restrictions can be formulated) considerably more 'abstract' than such, which in intention provide (part of) semantic characterizations directly.

This 'abstractness' is manifested in various respects. The differences between the underlying representation for a sentence and its surface structure are often very great - even though the alphabets of elements and the 'construction-types' involved show considerable overlap.<sup>2</sup> This is true particularly of the derivations finally proposed in Part III. Further, the semantic representation underlying 'simple' lexical items is often 'paralleled' by representations realized superficially as configurations of elements.<sup>3</sup> Thus (as observed in Anderson, 1968b: 308-9), the meaning of a verb like walk and certain restrictions on its occurrence (\*John walked on foot) are explicated if we consider

1. What one might call 'taxonomic deep structure' - cf. Chafe, 1968a: 120; Fillmore, 1968a: 88; Bach, 1968: 120; McCawley, 1968b: 165-9.
2. I.e., 'stratification' within the semantico-syntactic component is yet to be demonstrated - cf. Chafe, 1968b.
3. Cf. e.g. Lakoff, 1965; Bach, 1968: par. 5; Anderson, 1968b; Binnick, 1968b; Postal, 1970; McCawley, 1968c. For further examples like that discussed in what immediately follows, see Porzig, 1934.

the underlying representation for walk etc to be rather like (with various distinctions - see Anderson, 1968b: 309) that for travel on foot. That is, in particular, there is no single category corresponding to walk in the underlying structure. The configurational complexity underlying many 'simple' items is perhaps easier to appreciate when there is a surface derivational marker - as in a noun like driver - or when, in an unfamiliar language, we find an item for which there is in our native tongue no non-configurational (i.e. lexical) equivalent - as with terms of relationship like the Tlingit Kik! ('man's younger brother' or 'woman's younger sister') mentioned by Swanton (1911: 196), or the locationals in Koyukon and related languages which involve orientation with respect to the appropriate local river (Henry, 1969), or the variation, in certain Amerindian languages, in the (phonological) shape of the verb in accordance with the character of an associated nominal.<sup>1</sup> Compare English kick and punch with the French donner un coup de pied/poing.

Consider as a further simple illustration from English (suggested to me by some observations of Angus McIntosh) items like acquaintance or stranger, which are characterized notionally by 'an "inherent" relationship with someone else' which is not present with words like policeman - i.e. 'an acquaintance' is 'someone known to some particular person(s)' and 'a stranger' is 'someone not known to some particular person(s)'. Such facets

1. Cf. Hoijer's (1945) description of Apachean classificatory verb stems. See too Hoijer, 1959: 367-72; Davidson, Elford & Hoijer, 1963; and more generally, de la Grasserie, 1896: 38-44; 1914b.



of the meaning of these words, as well as restrictions like that exemplified in \*I don't know that acquaintance (of mine), are provided for by proposing as their underlying representations configurations which include the appropriate elements I have just represented informally. Other fairly clear instances come from the grammar of 'comparison' (whatever form it might take). McIntosh (1968) has suggested that many simple items (verbs, prepositions, nouns) represent the same underlying relations as 'overt' comparative structures (see too Bach, 1968: 120-1). Consider such different types as prefer ('like more'), darken ('become darker' or 'become dark'), exceed ('be(come) greater than'), beyond ('further than'), after ('later than'), top ('highest point').<sup>1</sup> Once more, an underlying configurational representation for such items seems appropriate; and once again such representations have alternative realizations which, in a sense, retain more of the abstract structuring. This alternation between (superficial) simple item and configuration is quite naturally accommodated within an account which allows for the lexicalization of complex structures (cf. the 'abbreviation (in terms)' of the seventeenth- and eighteenth-century universal grammarians).

One way of interpreting the notion 'lexicalization' is discussed in Anderson, 1968b. There, the verb walk (as opposed to move, travel, etc.) is regarded as being formed by an abbreviatory copying of the specification of an underlying

1. Clearly, the plea of Campbell and Wales (1969) for more attention to 'comparison' in language is fully justified.

adverbial (which would otherwise appear as on foot). That is, a feature (say, 'ambulatory' - which belongs once more to a set whose members are of varying generality) is added to the verb, the presence of which permits the deletion of the underlying adverbial; otherwise, the adverbial remains and travel on foot, etc. are the result. (It is no doubt more complicated than this, since (in particular) on foot, as a sub-type of instrumental, perhaps involves a complex structure (cf. Lakoff, 1968).) I shall refer to this part of the specification for an element as its derived (as opposed to inherent) lexical content.

The precise nature of lexicalization is unimportant for our present purposes, though it is worth noting, with Bach (1968: 117), that 'the particular sets of meanings and syntactic features which are given lexical status can vary widely' (from language to language), and that this is a major source of difference between languages;<sup>1</sup> this will be apparent as an

1. Cf. Boas's (1911a: 26) statement that 'every language may be holophrastic from the point of view of another language'. It is perhaps with respect to notions like the variability (over different languages) of lexicalizations and of the distinctions made within minimal semantic fields that one might investigate the linguistic aspects of a modified version of the linguistic relativity principle (see the works referred to in Miller, 1968), whereby languages are conceived of as differing in terms of the 'ease' or 'economy' with which different distinctions can be made or things referred to.

assumption throughout the following discussion. This is not to deny that there are constraints on the 'trajectory' for permitted lexicalizations (and grammaticalizations - as with tense - cf. Bopp's 'agglutination'). Typically, under lexicalization, it is a governing element (in the sense discussed below) that incorporates lexical material with respect to a dependent (or set of dependents). Thus, in verbalizations (e.g. walk - and see again Porzig, 1934), a dependent case phrase is involved in incorporation, in nominalizations (e.g. pedestrian) a dependent clause, and in casualizations (e.g. beside) a dependent NP. One can interpret the implicational relationship Hjelmslev posits between his three dimensions (cf. par. 1.21) as an articulation of constraints on casualization. We shall return in ch. 5 to a more careful consideration of the character of lexicalization within the particular framework outlined in what immediately follows.

However, more important than exploring the character of lexicalization in the present context is the conclusion to be drawn from such phenomena, namely that many distinct superficial items or sequences have in some sense a common underlying (semantic) source, and differ, for instance, in features marking the operation of certain transformations (as above) or indicating the arguments (cf. below). It is necessary to extend such a view and allow for widespread suppletion (Anderson, 1968b) if one is to match semantic representations with an appropriate paradigm of surface variants. For instance, I shall argue below (par. 9.6) that accept fills a gap in the paradigm for agree - in a



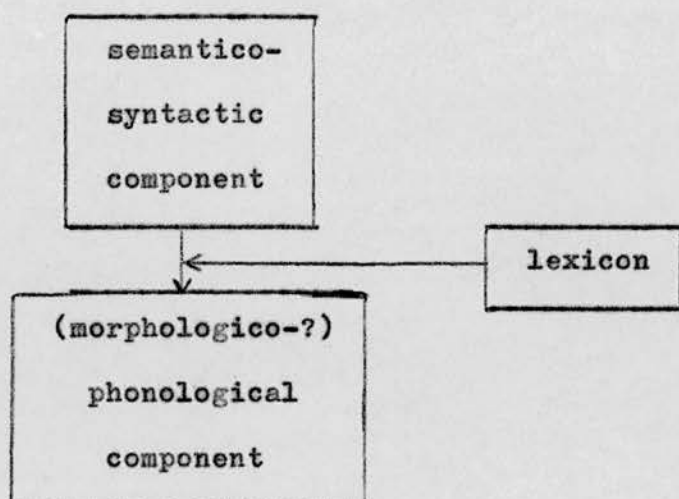
- (4) 1. a. He agreed to have the book  
b. He accepted the book  
2. a. He refused to have the book  
b. He refused the book

The phenomena of lexicalization and suppletion suggest that certain transformations at least operate independently of phonological information, and that if there is any determination it is rather in the contrary direction. It is indeed quite likely that lexical insertion, which introduces phonologically specified items from the lexicon, should be regarded (if it is a once and for all operation) as following many (at least) of the syntactic transformations (cf. particularly Matthews, 1965; Bach, 1968: par. 5; Lakoff, forthcoming). These would thus be formulated with respect to semantic (and referential, if necessary) specifications. Such a view would enable us to evaluate the 'semantic naturalness' of the specifications susceptible to particular transformations.

For our present purposes, something like the following crude schema for the organization of the grammar is suggested (see too Chafe, 1968a: 120-1):



(5)



(where such post-lexical transformations as are necessary are included (since they are dependent on phonological information) with morphological distinctions like those concerning declension and grammatical gender in the morphologico-phonological component). Notice that the vertical structure of this diagram indicates what seems to me the only place where anything approaching intra-linguistic 'stratification' has been shown - and even then the division is only 'quasi-stratificational' (cf. Chafe's (1967, 1968a) 'symbolization'), since even though the effect of lexical insertion is to introduce representations in terms of a new universal alphabet, the (interpretative) phonological rules nevertheless presuppose syntactic information.<sup>1</sup> However, this schematization ignores the possible incorporation of a 'topicon' - Sampson, 1969 - and the place of 'presupposition' with respect

1. Cf. Chomsky & Halle, 1968, etc. Thus, in so far as stratification has been substantiated, it is (Saussuro-) Hjelmslevian (Hjelmslev, 1954; 1961: particularly par. 13) rather than Lambian (Lamb, 1964a, 1964b, 1965, 1966) in scope.

to the semantics (cf. Fillmore, 1968c).

I shall be concerned in what follows almost entirely with certain aspects of the semantic sub-component, to a much lesser extent with the (surface) syntax, only marginally with the lexicon, and (as I have observed) not at all with phonology as such. Moreover, I shall not dwell on the formal implications or insist on any particular aspect of what I am about to outline as a characterization of certain aspects of the organization of the semantico-syntactic component.<sup>1</sup> My main concern is to provide a sufficient framework for the exploration of the localist hypothesis.

I have suggested elsewhere (Anderson, 1968a, 1969a, 1969c) that two types of rule appear to be appropriate to the semantic sub-component: firstly, rules which develop complexes of (category and) features which we can refer to as complex symbols (CSs) - subcategorization rules (SRs); secondly, rules which expand symbols into their constituents - constituency rules (CRs). Two points, in particular, require to be made with respect to the respective scopes of these types of rule. Rules of subcategorization, and thus features, are associated not only with lexical or terminal categories like N(oun) and V(erb) but also with pre-terminal categories like N(oun) P(hrase) and Cl(ause).<sup>2</sup>

1. These are (as I suggested above) for the most part secondary to the main argument; and anything I suggest is likely to be sacrificed in next month's ~~(last year's~~  
~~to you)~~ revolution.

2. Cf. Allen, 1956; Weinreich, 1966; Lyons, 1968a: par. 7.6.9; Chomsky, 1969b.

Also, and connected with this (cf. Hudson, 1967; Anderson, 1969a), the number of non-recursive 'layers' of constituents allowed for by the constituency rules is very small: between the initial category, S(entence) and the terminal categories there are at most two 'layers' (Cl and NP). Such a limitation is associated with the notion of 'rank' (Halliday, 1961: 250-4), and (as I have noted), is dependent on the presence of preterminal features<sup>1</sup> - which eliminate the necessity for intermediate layering.<sup>2</sup> We must now look at how these two types of rule 'interact'.

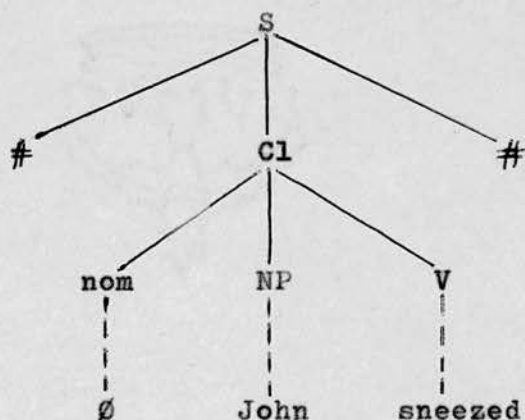
It is proposed that there are three 'obligatory' CRs (each associated, of course, with a 'step down' in 'rank'), which cannot but apply in the order in which they appear in (6) (since e.g. rule II presupposes the prior introduction of Cl):

1. Or 'systems' - Halliday, 1961: 263-8; 1964: 16-21.
2. Cf. Chomsky's (1965: ch. 2, par. 2.3) discussion of the motivations for and consequences of the introduction of 'syntactic features'. A similar reduction in the variety of underlying relations allowed for can be achieved in terms of the reduction of most (or all) of these to the 'sentential' ( $NP \hat{VP}$ ) - i.e., in particular, in terms of analyses involving 'abstract verbs' (Lakoff, 1965). The proposals formulated in Part III represent a combination of these two possibilities. A major problem in both instances ('featurization' and 'sententialization') is to determine the constraints appropriate to such powerful devices.

- (6) I.  $S \rightarrow \# Cl \#$   
 II.  $Cl \rightarrow nom + V$   
 III.  $NP \rightarrow N$

# is the clausal boundary marker: nom(inative) is a case category (whose status is discussed below - in par. 3). Such rules are to be construed as stating that the element to the left of the arrow (wherever in the course of a derivation it occurs) is replaced by (or rewritten as) the string to the right; the element(s) of that string are its (immediate) constituents. There is a rule (which we shall discuss below) which inserts a NP after (in English) any case category (and whose operation therefore must precede that of III). Thus, if we take this last rule into account, the rules in (6) will provide (in terms of the usual conventions for tree-formation) for the aspects of the structure of, say, John sneezed represented in (7):

(7)



In the papers referred to above, I suggested that Det(erminer) was introduced with N in the rule equivalent to III in (6). However, it is clear that 'determiners' as such represent a rather superficial phenomenon: see, for instance, particularly



on the so-called 'indefinite article', Perlmutter, 1969; the 'definite article', in its turn, is a sub-type of 'demonstrative' (cf. e.g. Key, 1844; 1846-7; 1874: ch. 25), which would appear to have their source in a (embedded) locative.<sup>1</sup> This category is thus excluded from rule III. NP is retained as a pre-terminal category to allow for noun modifiers (via, in particular, the embedding of S - 'noun phrase complementation' (Rosenbaum, 1967a; Rosenbaum, 1967b: particularly chs. 1 and 2) and 'relativization')). In a similar way, there was in these papers a CR parallel to III which expanded V(erb)P(hrase) as T(e)ns(e) + V, VP having been introduced in II in place of V. For similar reasons, too, Tns is omitted from the present rules: like the markers of 'aspect', it is likely that tense markers derive from super-ordinate temporal locative clauses (cf. Darrigol, 1829; Garnett, 1846-7). Further, in this instance, VP can probably be eliminated as a pre-terminal category - since the evidence for the notion of 'verb phrase complementation' (as originally formulated by Rosenbaum, at least - though see par. 12) is rather tenuous (Rosenbaum, 1967b: preface; Bowers, 1968; Wagner, 1968).

Associated with each of the pre-terminal categories (S, Cl, NP) is a set of rules of subcategorization which develop CSs with S, Cl and NP (respectively) as the initial element. These rules are of the general form represented in (8):

- (8)      1. category<sub>a</sub> → ±feature<sub>i</sub>  
          2. +feature<sub>i</sub> → ±feature<sub>j</sub>

1. With 'speaker'/'addressee' reference - cf. McCawley, 1968b: 155-61; Lyons, 1968a: par. 7.2.3.

wherein each rule is to be interpreted as stating that any CS that is already specified with respect to the element on the left of the rule is to be replaced by a CS containing the previous specification together with either a +value or -value for the feature on the right; and, once more, the relative order of e.g. SRs 1 and 2 in (8) is determined by the elements involved. Depending on the selections made in (8), various CSs are developed, as indicated in (9):

- (9) a. 
$$\begin{bmatrix} \text{category}_a \\ +\text{feature}_i \\ +\text{feature}_j \end{bmatrix}$$
- b. 
$$\begin{bmatrix} \text{category}_a \\ +\text{feature}_i \\ -\text{feature}_j \end{bmatrix}$$
- c. 
$$\begin{bmatrix} \text{category}_a \\ -\text{feature}_i \end{bmatrix}$$

Thus, the categories are merely the initial elements in (potential) CSs.<sup>1</sup> Such SRs specify the semantic alternatives (such are the feature oppositions) appropriate to each category, and their ordering explicates the (hyponymic) relationship between the individual oppositions. Certain semantic oppositions have a sentential domain, others a clausal, and so on.

1. This distinction between category and feature is analogous to that drawn within the phonology by e.g. Kohler (1966: 340) in terms of sequential vs. componential elements. Cf. too particularly Chomsky, 1965: ch. 2, par. 2.

Observe further that the SRs also control the development of the structures immediately dominated by the category which initiates the CSs formed by these rules. For instance, one might have a SR for the clause of the following form:

(10)  $Cl \rightarrow +locative$

which distinction underlies (in a fairly obvious way) part of the (notional) difference between, say, the clauses in (11):

- (11) a. John lay on the floor  
b. John sneezed

(11a) is 'semantically' a 'locational' clause in a sense which (11b) is not. Moreover, the effect of selecting +locative is to introduce another case phrase - assuming that the subjects in both of the clauses in (11) are nominative; i.e., the Cl in (11a) has an extra case constituent. Such a possibility is allowed for if we modify the notion of CR (cf. the examples in (6) to include (after II in (6)) rules like that in (12):

(12)  $+locative \rightarrow loc//V-$

which is to be understood as stating that if the feature specification +locative occurs in a CS, then a category, loc, is inserted in the string of elements immediately dominated by that CS. The place of insertion is indicated to the right of a double slash, as in (12). That particular rule requires the prior operation of rule II in (6) to provide the appropriate environment. In the proposed sets of rules which follow I shall suggest that each element be introduced in what can be shown to be its 'neutral (or unmarked) position' in English (from which it may be shifted by subsequent syntactic (i.e. transformational)



rules); but I shall review the nature of such a concept in more detail in Part III. If -locative is selected in (10), then obviously rule (12) does not apply, and the structure dominated by the CS is unaffected (as in (10b)). Clearly, the rules in (6) can be regarded as a sub-type of such rules, which refers only to categories, instead of a feature and a category - as in (12). Their formal nature thus becomes much more mysterious than the gloss of them proposed above (following (6) ~~in pars. 2-24~~) implies. I want to allow too for CRs which refer only to features, i.e. CRs whereby a +feature 'introduces' a feature which is added to a terminal category (see Anderson, 1968a: 5-7; 1969a: 131-3), which thus once again represents (potentially) a CS. We can thus make a distinction (within the part of the grammar we are concerned with) between pre-terminal or primary features (which are introduced by SRs) and terminal or secondary features (which are introduced by CRs). Such CRs can be represented as in (13):

$$(13) \quad +p.f._i \rightarrow s.f._j // \left[ \begin{array}{c} \text{category}_k \\ \hline \end{array} \right]$$

I.e. the presence of (primary feature)  $+p.f._i$  in a CS initiates a CR which introduces (secondary feature)  $s.f._j$  into the CS initiated by  $\text{category}_k$  and immediately dominated by the CS that contains  $+p.f._i$ . Secondary features are not specified as to + or -, since only +specifications for primary features appear in rules like (13).<sup>1</sup> Thus CRs 'expand' CSs like those in (9) in terms of their constituent categories and features.

1. This does not mean to say that (transformational) rules which refer to the absence of such a feature cannot be formulated (if necessary).



Associated with each pre-terminal category, then, is a set of SRs and a (subsequent) set of CRs which develop constituents for each CS initiated by the category, in accordance with the particular selections represented in the CS. These two sets comprise the semantic sub-component - at least, those parts of it that are directly relevant to the present study. Defined upon the specifications which form the output to these rules is a set of syntactic (transformational) rules (TRs), which associate with the appropriate semantic representations a class of well-formed (surface) syntactic structures. However, I have suggested elsewhere (Anderson, 1968a: 20; 1969c) that it is possible that certain TRs follow immediately the semantic rules for (e.g.) Cl, rather than all the semantic rules. They would thus intervene between the successive sets of semantic rules associated with the respective pre-terminal categories. Since (as is remarked on above) the transformational rules are conceived of as operating with respect to 'abstract' (not phonologically specified) representations in general, this would not present any fresh problems. But the evidence so far adduced for such a requirement is somewhat tenuous, in that, in particular, the interpretation of the imperativization phenomena mentioned in Anderson, 1968a: 19-21, is rather complex (cf. Boyd & Thorne, 1969: 58-62), and also the rule which introduces a NP for each case, which might be formulated as in (14):

(14)     case  $\rightarrow$  case + NP

(where case is defined as any immediate constituent of Cl apart from V) and which is a TR that clearly must precede the rules for NP, is eliminated as such by a modification to the grammar

I shall propose below. Nevertheless, I shall allow for the insertion of a set of TRs between each bloc of semantic rules; and we shall consider what evidence for such emerges from the discussion which follows in other chapters.

Accordingly, the rules of the semantico-syntactic component fall into three successive sets. The first set of SRs, CRs and (perhaps) TRs is associated with S; they allow for the semantic oppositions and the variety of structures that are relevant to the notion of coordination of clauses (cf. Anderson, 1969c: 307-8), and introduce one or more clauses (and conjunctions where appropriate) as constituents of S. The rules for Cl define the semantic oppositions associated with the introduction of the various constituents of clauses, including particularly the cases. NPs are also introduced, as we have seen, by a TR which operates at this stage. NPs have then, in their turn, a set of rules associated with them which accounts for the appropriate semantic alternatives and structural variety. Each successive set presupposes (the elements introduced by) the previous set. Thus, we have three ordered sets of rules:

- (15)      I. S     $\rightarrow$  ...  
                     ....  
            II. Cl  $\rightarrow$  ...  
                     ...  
           III. NP  $\rightarrow$  ...  
                     ...

Within I, II and III there are three further subsets of rules: of sub-categorization, of constituency and (perhaps) of transformation - each set presupposing (the elements introduced

by) the previous one. So:

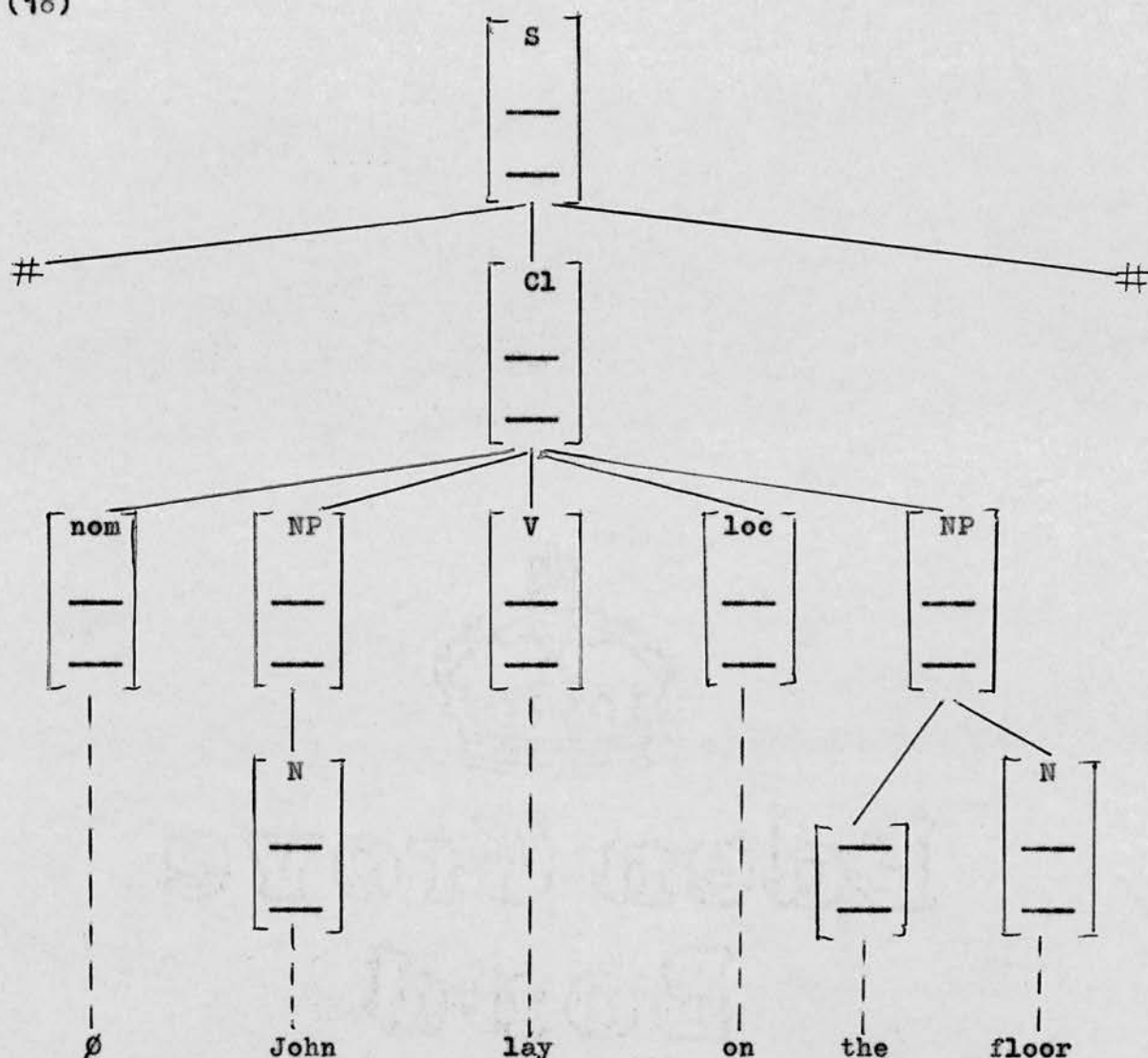
- (16) I. i.  $S \rightarrow \pm \dots$   
       ....  
       ii.  $S \rightarrow Cl$   
       ....  
       iii. ....  
   II. i.  $Cl \rightarrow \pm \dots$   
       etc.

Within each of the subsets indicated in (16) the rules are partially ordered. They are thus assigned integers (from 1 to n) to represent this order; 'simultaneous' rules (i.e. which operate at the same point in the sequence) are paired with the same integer and distinguished by a letter (a,b,c, ...). An exemplification of such is presented in (17):

- (17) II. i. 1.  $Cl \rightarrow \pm \text{feature}_i$   
           2. a.  $+\text{feature}_i \rightarrow \pm \dots$   
               b.  $-\text{feature}_i \rightarrow \pm \dots$   
       ii. 1.  $Cl \rightarrow \text{nom} + V$   
           2.  $+\text{feature}_i \rightarrow \dots$   
           ....  
       iii. 1.  $\text{case} \rightarrow \text{case} + NP$

Associated with such rules are structural descriptions like that abbreviated in (18):

(18)



Notice that it is only the rules within iii in each of I, II and III (the TRs) that display any 'significant' ('extrinsic' - Chomsky, 1965: 223, note 6) ordering, in the sense that the ordering of the rules within i and ii and the ordering of I, II and III is simply dictated by the elements that appear in the rules (cf. McCawley, 1968a). For instance, an element that is required as an environment for a rule must have been introduced by a logically previous rule. (Some instances of ordering within ii are perhaps significant (cf. II. ii in par. 3.3), but this property is removed by the proposal made in Part III). It may be that one should regard i and ii as simply constituting



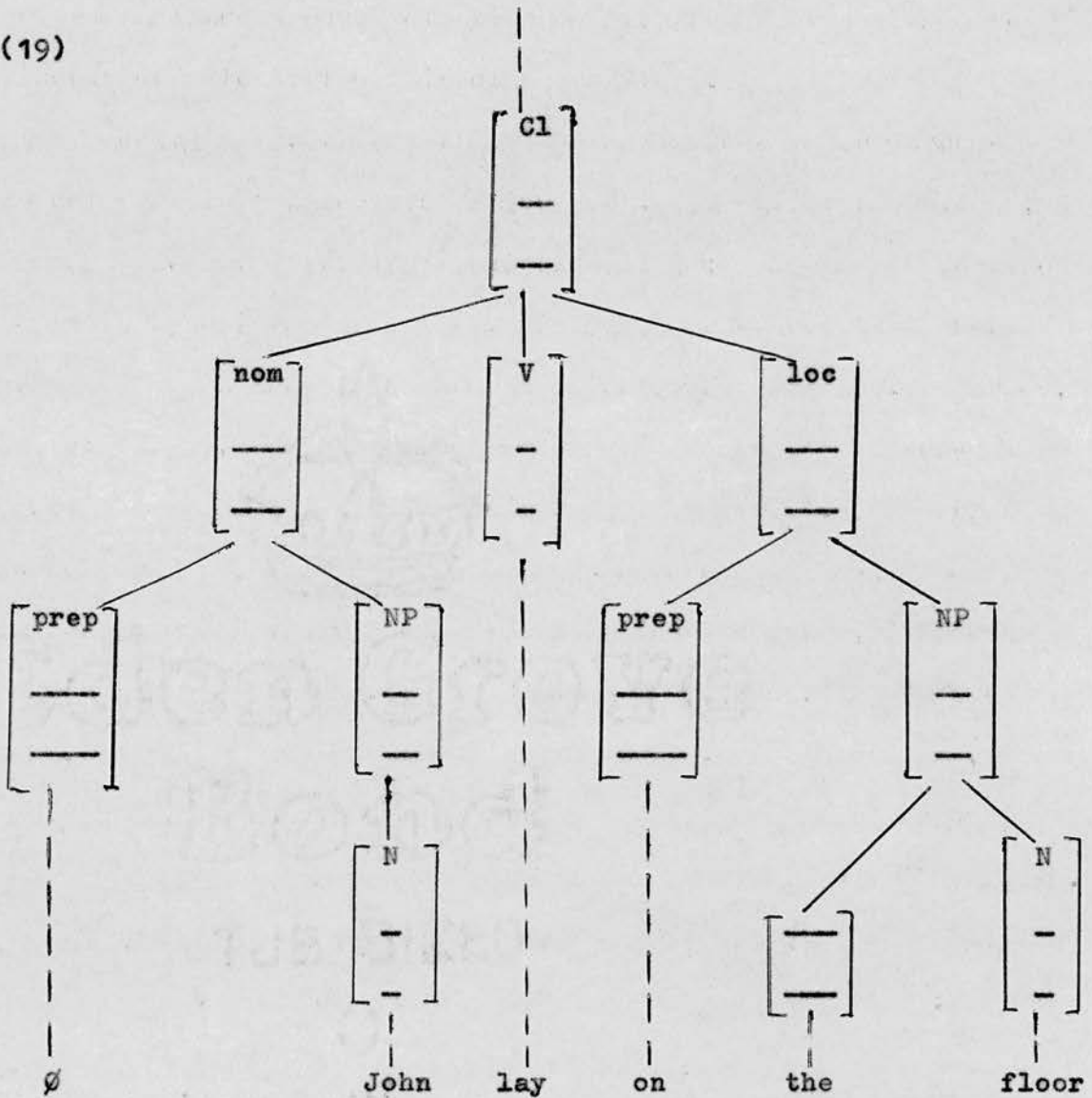
well-formedness conditions on semantic representations.

However, there are various inadequacies, particularly with respect to the specific sub-parts we are primarily interested in, to be found in such a sketch for a grammar. I want now to consider a possible modification which is intended to remedy one defect in the characterization of phenomena that are at the centre of our area of enquiry; and this concerns the relation between a case and its associated NP. As I have tried to indicate briefly elsewhere (Anderson, 1971a; 1971c: par. 2.5), it seems to me that an account like that I have just outlined fails to capture the essentially 'relational' character of cases - the fact that they indicate the functions in the clause which their respective NPs contract. In (18), nom and its associated NP (introduced by rule II. iii. I in (17)) appear merely as co-constituents of the clause, and there are further co-constituents which are not related to them in the same intimate way in which they are related to each other. Of course, one could introduce some sort of auxiliary marking which would represent the fact that a rule like II. iii. I had operated by indicating a relationship between nom and the following NP. However, this would constitute a somewhat mysterious device imposed on the results of the operation of certain rules, and does not emerge in a natural way from the rules themselves. Thus, both the degree of intimacy of relationship between case and NP and the relational character of case are inadequately represented by structural descriptions like (18).

Given this, one alternative that suggests itself is to introduce NP as a constituent of case, together with a

co-constituent - say prep(osition) - realized (in English) as at, on etc. Thus:

(19)



A similar viewpoint (on the relevant aspect of the representation in (19)) is adopted by Fillmore (1968a: 32-3).<sup>1</sup> There are at least two related deficiencies in such accounts, despite the

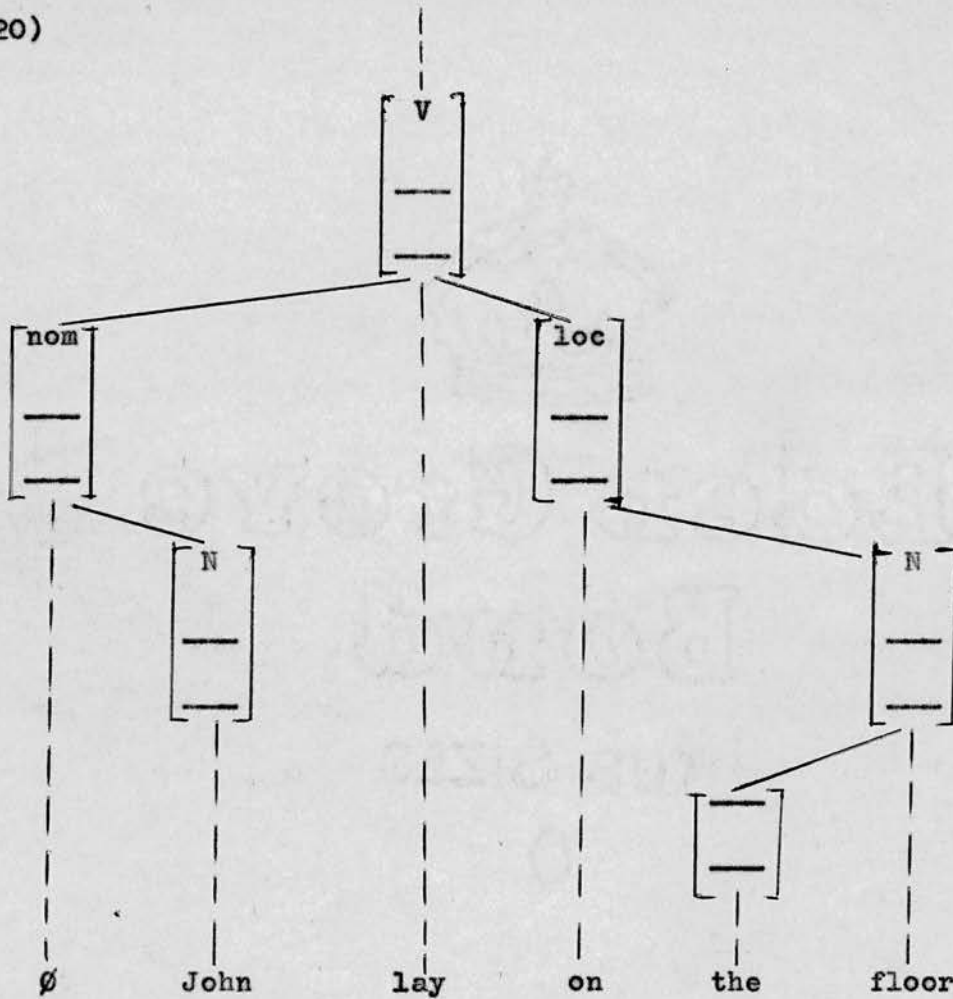
1. Compare too the relation between (say) adjunct and prepositional phrase allowed for by Halliday (1961) - though the difference is described as not merely one of constituency ('rank'); Fillmore (1968a: 88) also compares the case representations he proposes with tagmemic formulae.

fact that the dominating position of nom, loc, etc. with respect to NP comes closer to capturing their 'relational' status. It seems to me misleading, however, to suggest a constituency relationship for, say, loc and NP; loc is not a constituent of which NP is one constituent, but rather it expresses the function which a particular NP has in the clause. Certainly, with regard to representations like (19), it can be shown that a particular (many-to-one) sub-type of constituency is involved; but it would still seem to me that the 'relational' character of case is being given only an indirect expression. The inappropriateness of regarding NP as a constituent of case is revealed by the fact that an extra (otherwise unnecessary) category is introduced in (19) (as compared with (17)) - namely prep, which, together with NP, will have to be marked as locative, etc., depending on the nature of the dominating case. The two types of categories, case and preposition, are needed only because of the fact that case as a pre-terminal category can be provided with a phonological representation only indirectly, via a terminal category (prep) introduced specifically for this purpose. In this respect, the account underlying (18), which introduces cases as terminal categories, is to be preferred - although, as we have seen, it is rather more inadequate in other respects. The crux of the problem is then this: it is to characterize an element which in some sense indicates the functions of NPs with respect to what is denoted by the V but which is nevertheless a terminal category.

I proposed in the paper referred to above (Anderson, 1971a; and Fillmore (1968a: 87) mentions such a possibility)

that certain at least of these problems are resolved if underlying representations are interpreted in terms of dependency (in the sense of, for instance, Hays (1964), Gaifman (1965), Heringer (1967), Robinson (1970a), M<sup>a</sup>pas (1971)). Instead of (18) and (19), in particular, I suggest a representation like that in (20):

(20)



Pre-terminal categories have been eliminated, and in place of the constituency relationship, the categories are 'hierarchized' with respect to dependency. Loc and nom are dependent on V (which thus governs them); and they each have dependent on them (i.e. they govern) a N. Thus, the case elements can be



interpreted quite naturally as expressing the relation contracted between their dependent Ns and the governing V (which replaces the Cl of the constituency grammar), and they are nevertheless terminal categories.<sup>1</sup> The governing (and 'hyper-relational') position of V within the clause can be justified in various ways, including in particular that as such it will be assigned the clause sub-categorization rules - which allow for the various combinations of cases, among other things - and it would be necessary anyway to subcategorize verbs with

1. The relation of such a proposal to various traditional concepts like 'rection' is briefly discussed in Anderson, 1971a: particularly notes 4, 5 and 6. Such an interpretation of case also appears to be close to the Kāraṇas of the Sanskrit grammarians, or the Greek notion of (oblique) cases as indicating the nature of the noun's dependence on the verb. Cf. particularly, the concepts of 'actant' and 'valence' in Tesnière (1959) and the works referred to by Droyscher (1969) and M<sup>a</sup>as (1971). Notice, however, that the suggestion of a dependency grammar for this part of the grammar does not necessarily exclude the possibility of constituency elsewhere (e.g. perhaps in the morphology, or in terms of late syntactic rules imposing a surface structure bracketing). I shall not touch on such questions here. My aim is merely to argue that case relations can be given a more natural expression with respect to the notion of dependency.

regard to the cases they co-occur with. The following discussion will provide, I think, further support for this interpretation. In this way, too, the essentially relational (notional) role of V is contrasted with the basically 'thing'-referential  $N^1$  (which governs in underlying representations only by recursion). We shall return to this distinction in ch. 8.

I am suggesting then that rules like those in (17) be replaced by such rules as are presented schematically in (21):

- (21) II. i. 1.  $V \rightarrow \pm \text{feature}_i$   
           2. a.  $+\text{feature}_i \rightarrow \pm \dots$   
               b.  $-\text{feature}_i \rightarrow \pm \dots$

1. Cf.: 'nouns are primary, in the sense that they are linked referentially with "things" (in the "nuclear" instances)' (Lyons, 1966: 230). It is possible to accommodate this 'referential primacy' of nouns without acceding to Lyons' subsequent argument concerning the purely surface centrality of the verb. Within the dependency framework outlined here, verbs (or 'predicators') and nouns are 'basic' with regard to different aspects of the semantic representation. Verbs are central relationally: they govern the case functions contracted by nouns. Nouns are primary referentially (and perhaps selectionally - but cf. Seuren, 1969: par. 3.2.2); they terminate (non-recursive) dependency trees.

- ii. 1.  $V \rightarrow \text{nom} // -V$
- 2.  $+feature_i \rightarrow \dots$
- ...
- iii.           ...

The rules in ii are dependency rules (DRs) which introduce a dependent category (or a secondary feature), given the presence of a particular element in the governing CS - which latter is indicated to the left of the arrow. The position of the dependent category with respect to its governor is indicated to the right of the double slashes. In this way, II. ii. 1 requires the introduction of a dependent nom before a V.<sup>1</sup> Thus, the rules in (21) differ from those in (17) in the substitution of V for Cl and the replacement of the CRs in II. ii in (17) by the DRs of (21).

A further difference between the two kinds of representation is that N appears in (20) in place of NP. The modifiers of N which form within a constituency framework co-constituents of NP with the N are regarded within a dependency account as elements governed by the N. Some arguments against the treatment of the relationship between a N and its modifier(s) as one of co-constituency of a NP are put forward by Lyons (1968a: pars. 6.3.7, 6.4.3, 7.6.8). He suggests that CRs fail to provide an adequate expression of the notion of endocentricity fundamental to such a construction, just as they are inappropriate to the exocentric type that has been our concern in the immediately preceding discussion.

1. The obvious redundancy of the notation has been introduced in the interests of clarity to the reader.

Note further that the rule introducing N (NP) after each case category (conceived of as a TR in (17) - rule II. iii. 2) can now be conceived of as a DR of the form presented in (22):

(22)      case  $\rightarrow$  N//case —

The 'propositional' aspect of semantic representations is thus constructed uniformly in terms of dependency relations. The rules of the semantico-syntactic component must then be regrouped in four rather than three blocs. Set II is as proposed in (<sup>21</sup>~~xix~~), i.e. with the rules for the clause reassigned to V; set IV (previously III - in (<sup>15</sup>~~xiii~~)) are the SRs, DRs and TRs for N (previously NP). (I shall however retain the terms 'NP' and 'clause' or 'predication' to refer to whatever is governed by a N and a V, respectively; and I shall employ 'case phrase', etc. in a similar fashion.) Set I accounts for coordination of clauses. Set III includes the DR presented in (<sup>22</sup>~~xx~~) and presumably (e.g.) SRs and further DRs (parallel to those in I) to provide for 'NP-conjunction' - since the evidence that at least some superficial instances of such are not derived by a reduction of a sentence-conjunction would appear to be quite strong.<sup>1</sup> Thus more than one N may be associated with each case category, as also there may be more than one clause per sentence.

Robinson (1970b) has also argued for an interpretation of Fillmore's (1968) proposals in terms of dependency. According to her suggestions, however, Vs would be subcategorized (a)

1. See e.g. McCawley, 1968b: 148-55; Dik, 1968: particularly ch. 5; Hudson, 1969; but cf. Matthews, 1969: 351-6.



with respect to the number of cases they are compatible with (strict subcategorization) and (b) with respect to the character of the cases they select (selectional restrictions). She thus proposes underlying structures like the following (adapted from her illustration (36), p. 78):

(23)



Each K ('kasus') would have associated with it certain inherent features (say, [+agentive]). However, as will be clear from our subsequent discussion, the restrictions formulated under (a) can be predicted from the information contained in (b): i.e. the number of case phrases accompanying a V (or N) can be predicted from the kind of V that is involved (and the kinds of arguments it therefore takes). This seems to me a reflexion of the illusory character of the distinction between strict sub-categorization and selection, and indeed of the distinction between category and feature. We shall consider the latter distinction further in chs. 6 and 8.

I shall not explore here the nature of the rules or elements responsible for conjoining Vs or Ns (if we assume that not all instances of 'NP-conjunction' are derived).<sup>2</sup> I shall thus avoid as much as possible invoking instances displaying

coordination of clauses. Sentences involving questions, commands and modals will also be eschewed, in that they introduce a wide range of considerations outside our main topic.<sup>1</sup> I shall, for our present purposes, assign questions and commands to the discarded rag-bag of I. Distinctions relating to the further mysteries of tense and aspect will be ignored in what follows. The rules within III and IV will also in the main not be our concern - apart, of course, from the DR in III which introduces N. We shall thus for most of our discussion not be concerned with the structure of NPs, although questions relating to certain aspects of this will arise crucially in ch. 8. That is, we shall be focussing our attention on the relationship between a V and its associated cases. I want, then, to focus our attention on the SRs, DRs and TRs within II which account for the introduction, interrelation and distribution of the case elements which form the object of the present investigation.

### 1.3 Remarks on the localist hypothesis

In discussing the grammatical role of case inflexions (or pre-/post-positions) it has for some time been the usual custom to talk in terms of different 'functions' or 'uses' of each case, and in particular to separate out 'concrete' (or 'local') uses from 'purely syntactic' ones (and among the 'concrete' to differentiate between (especially) the 'spatial' and the 'temporal'). Also, certain cases are usually considered to be 'characteristically' or 'basically' either 'concrete' or 'syntactic'. Between the 'concrete' and the 'purely syntactic' are often ranged uses

1. Cf., e.g. Boyd & Thorne, 1969; Ross, 1970;  
Anderson, 1971b.

which are not obviously or merely spatial (or temporal) and do not seem to be 'purely syntactic' either, but are described in terms like 'dative of possession' or as being appropriate (to mark the 'indirect object', etc.) with certain (semantic groups of) verbs (e.g. 'verbs of giving or putting'). What I have just very briefly outlined can be exemplified from almost any recent traditional classical grammar, or any grammar compiled within that tradition.<sup>1</sup> In terms of such a framework, one might say that the nominative in, for instance, Latin is a case with typically 'syntactic' functions (subjective, etc.), whereas the Latin accusative combines both 'local' (as 'goal' - Romam ire) and 'syntactic' (as object - Romam videre) uses. A prepositional example like to in English shows (among other things) a somewhat 'abstract' use with verbs of 'giving', etc. (I gave the news to the porter) and also a more 'concrete' and 'local' function (in sentences like I travelled to London). It is doubtful whether there are cases (or prepositions) which are only ever 'concrete' in the strict sense of the word (whatever that might be); this would at least appear to be true of the various accounts of case systems that I have consulted in connexion with the present work. Such is a typical traditional viewpoint, and it continues to inform (though with modifications) more recent discussions like those of Kuryłowicz (1949; 1964: ch. 8).

Within such a framework, then, the cases of, for instance,

1. Consider, for example, Gildersleeve & Lodge, 1895: 207-66; Macdonell, 1916: 298-328; or the relevant parts of almost any of the grammars referred to by, say, Havers, 1911. See too Lyons, 1968a: par. 7.4.2, for a discussion of such traditional presentations.



Finnish<sup>1</sup> might be divided into two groups with regard to their principal uses: the 'syntactic' and the 'local'. The latter indicate location in space (and 'metaphorical extensions' of such), and comprise two main subgroups, the 'internal' and the 'external', each subgroup containing three distinct cases. One case in each subgroup indicates simple location; the internal ('inessive') locates with respect to the inside of some referent, and the external ('adessive') with respect to the surface. The other two represent 'motion from' the interior ('elative') or exterior ('ablative') and 'motion to' the interior ('illative') or exterior ('allative'). We can roughly compare the English prepositions in, on, out of, from, into, to. There is a further 'local' case, namely the 'prosecutive' or 'prolative', which expresses 'motion through, along or over'. Also perhaps to be included here is the 'comitative' which indicates typically 'the person along with whom'. Identical in representation to the comitative in many languages but not in Finnish is the 'instrumental' or 'instructive', which represents the means or manner by which some action is performed, and is thus intermediate between 'local' and 'syntactic'.

The typical 'syntactic' cases, which fulfil non-'local' functions, are the nominative, accusative and genitive. The first marks the subject of a sentence and a predicative nominal, and the direct object in imperative sentences (i.e. when no subject is

1. See e.g. Eliot, 1890: particularly 121-62; and for a semi-localist treatment, cf. Sebeck, 1946. For some exemplification of 'syntactic' and 'local' functions, see e.g. Lyons, 1968a: pars. 7.4.5-7.4.6.



present); otherwise, the direct object is represented by an accusative. The genitive is the (superficial) adnominal case par excellence. A further small set of cases blurs this dichotomy, and also, in particular, the preceding description of the syntactic cases. These are the 'essive' and 'translative' which alternate (meaningfully) with the nominative in marking a predicative nominal (the second being used in 'inchoative' sentences), and the 'partitive', which alternates (once again, meaningfully), with the nominative and accusative in representing subjects and objects. This last group, then, introduces further distinctions within the 'syntactic' cases, and also, more interestingly from the point of view of the following discussion, they have in addition 'local' uses, which indeed appear to antedate the 'syntactic' uses. In this respect, essive, partitive and translative constitute a parallel series to adessive, ablative and allative.<sup>1</sup> There is also some evidence (Eliot, 1890: 138) that the Finnish genitive 'incorporates' a former 'dative', which is typically used in many languages to mark the subject with

1. It is this sort of phenomenon that is perhaps most obviously suggestive of a localist interpretation (as discussed in <sup>below</sup> par. 1.2 - ~~see too par. 11.62~~). In other languages (e.g. Hungarian - cf. Sauvageot, 1951: 236-47), we must allow for a further series among the non-internal set, such that there is a distinction between a group of three cases indicating location with respect to a surface ('superessive', 'sublative' and 'delative') and a group expressing proximity (adessive, allative and ablative).

certain ('impersonal') sub-types of verb, and also the 'indirect object' (a further 'syntactic' use). Such an account is, in principle, in Hjelmslev's (1935: particularly 55-61) terms, 'demi-localist', in that these two sub-types of case are recognized, the 'grammatical' or 'syntactical' (or 'logical' - though this is, of course, often used distinctively (cf. par. 4.31)) and the 'concrete' or 'spatial' or 'topical' (cf. Holzweissig, 1877).

In other languages - e.g. the so-called 'ergative languages' - the non-'local' cases display a somewhat different superficial organization: this will be relevant to our later discussion, and I will postpone an examination of such phenomena until then (par. 4.6). However, it is worth noting at this point that an account of this kind (involving strict separation of 'local' and non-'local') provides no explanation of why certain cases have both 'local' and non-'local' uses (a point which Hjelmslev, in his argument for a fully 'localist' theory, ~~see par. 1.24~~ makes much of). Also, since the number of morphological cases varies from language to language, the uses associated with any particular case label are far from constant: hence some of the problems discussed <sup>below</sup> in ~~par. 1.3~~.

Comparability is improved if prepositions or postpositions are included. Thus, as indicated in par. 1.1, I shall want for the purposes of the following discussion of the semantics of case functions to ignore any distinction that might be drawn between 'case' and 'pre/postposition' (cf. e.g. Lyons 1968a: par. 7.4, particularly par. 7.4.7), and include under the label 'case' (in somewhat Wundtian fashion) 'functional' elements in

general (while not neglecting the fact that prepositions, for instance, appear to be more appropriate to the representation of certain functions than others).

Less commonly, attempts have been made, on the one hand, to show a relationship between the 'concrete' and the more 'abstract' uses of the same case or preposition - as, for instance, with the uses of English to mentioned above - and, on the other, to reveal common principles underlying both such uses and 'purely syntactic' uses (of the same case, or more generally - as with the Latin accusative (exemplified <sup>above</sup> in ~~par. 1.4~~), or with respect to it and the preposition ad). I am thinking in particular of the more or less localist accounts (of cases or prepositions) offered by scholars like the Byzantine Maximus Planudes, who appears to have been the first grammarian of note to evolve a coherent (and extant) localist theory of case,<sup>1</sup> Harris (1751: book 2, ch. 3), Condillac,<sup>2</sup> Wüllner (1827 - developing Bopp's proposals), Hartung (1831), Key (1850-2; 1874: ch. 18), Madvig (1875), de la Grasserie (1890; 1896: 178-82) and Hjelmslev (1935-7) (and, to a lesser extent, Jakobson, 1936, 1958).<sup>3</sup> The more radical of these attempted to relate all case functions to a small number of universal relations, of which the spatial uses ('location at', 'movement from/to') of (certain of) the

1. But see the remark of Theodosius quoted by Steinthal, 1863: 623. Planudes' work is printed in Bachmann, 1828: 1-166.
2. See Le Roy, 1947: 478a-81b.
3. See too Vogt, 1949; Sørensen, 1949; Kuipers, 1962; Velten, 1962. Other works are referred to by Hjelmslev (1935: 1-70) and Brøndal (1948: 49-50).



8/ cases represent only the most 'concrete' manifestation. Other scholars, like Darrigol (1829) and Garnett (19<sup>46</sup>-7), attempted to extend such an analysis to aspectual distinctions - and we shall be returning to their analyses in the course of the discussion in ch. 6.

Hjelmslev - to take a more recent proposal - sets up three semantic dimensions for case systems - 'direction' ('éloignement'/'repos'/'rapprochement'), 'cohérence'/'incohérence', 'subjectivité'/'objectivité' - which are intended to characterize the relations expressed by both 'syntactic' and 'local' cases. A number of cases can be differentiated with respect to a single dimension, since Hjelmslev recognizes, apart from the possibility of cases representing the two polar terms and a neutral term (such as 'repos'), complex cases like, typically, the nominative, which can represent both 'éloignement' (as subjective) and 'rapprochement' (as predicative). Further, the dimension is capable of different 'orientations', depending on which case is the 'intensive' (roughly, semantically 'marked' or simplex) one. For instance,

*Footnote*  
Hjelmslev, indeed, provides a quite extended survey of the development of the various issues surrounding the localist vs. anti-localist debate, the comparative neglect of which is a relatively recent phenomenon. For a concise illustration of a localist hypothesis, see particularly Hjelmslev's (1935: 11-13) account of the analysis of the Greek case system proposed by Planudes; and cf., on Hjelmslev's own proposals, par. 1.21 below.



Hjelmslev/§ (1935: 45-6, 101) proposes that the Latin ablative is 'intensive' (with respect to the dimension of 'direction'), in that 'l'ablatif latin insiste sur l'éloignement; toute autre cas du système normal du latin est complexe ou neutre à l'égard de la dimension de direction' (101). In another language (Hjelmslev suggests Greek), it might be a case representing 'rapprochement' that is 'intensive'.

The third dimension, which differentiates between cases which express relations from the point of view of a spectator (typically the speaker - as in a prepositional example like He is behind the tree) and those which do not necessarily (He is underneath the tree), presupposes the second, but not vice versa. That is, the (morphological) cases of a particular language may not express those appropriate to the second dimension. This relationship of pre-supposition also holds between the second dimension (which typically distinguishes between, for example, an inessive ('cohérent' - dans) and an adessive ('incohérent' - à côté de)) and the first. Thus, only the first dimension may be appropriate to the casual system of certain languages.

Other apparent restrictions are more problematic. In general, it is difficult to see the relevance of the second and third dimensions to the 'purely syntactic' cases - except negatively (they are 'incohérent' and 'objectif'? - though see chapter 44<sup>8</sup>, particularly par. 44.6). It is not clear too how further kinds of 'spatial indication' (Collinson, 1937: 50-4) are to be accommodated. These could no doubt be regarded as essentially nominal rather than casual, so that the markers of such require a complex derivation from a superordinate nominal rather than a simple case

or preposition (i.e. are derived by 'casualization' - par. <sup>1.2</sup>~~2.424~~); but then this might also be said (as is the case at least superficially in many languages) of, for example, the 'subjectivité'/ 'objectivité' distinction (cf. behind (= 'at/to the back of')). Might not the marking of this distinction simply by case-inflexions be merely superficial (rather than an indication of an underlying casual status) even in those languages where we find this phenomenon?

Such questions are in part a reflexion of a wider deficiency, as a result of which (in particular) such attempts at a localist account can be judged to have been only partially successful; and this was, I think, due especially to the fact that the analyses were applied on the whole to case as a superficial phenomenon - semantic values were, for the most part, attached directly to cases as surface morphological categories. This was despite the fact that such factors as the relationship between casual inflexions, 'word order' and prepositions were recognized (but remained to some extent strangely unexplored in any rigorous way) by, for instance, Wüllner (1827: 6-9) and Hjelmslev (1935: 40-3, 107) - as well as (in some respects at least) by many other scholars in the past, of course,<sup>1</sup> and particularly since

1. Cf. e.g. Robertson, 1905: 524-5; Trabalza, 1908: 123; Kukenheim, 1932: 108, 140; Chomsky, 1966: 44-5; Donzé, 1967: 171; Harris, 1951: 25-6; Hjelmslev, 1935: 24, on Bernhardt; Benveniste, 1949; Lyons, 1968a: par. 7.4.5; Salmon, 1969: 177. On the historical relationship between case inflexions and prepositions, see particularly, e.g., Pott, 1836: 613-51; Velten, 1962.

the time of Wundt. Certainly, an extension of Hjelmslev's avoidance of a simple 'Grundbedeutung' for nominatives would enable us to overcome the difficulties met by any approach which attempted to characterize the subject-verb relation in terms like 'actor-action' when confronted with sentences like the following:

- (24) a. That envelope contains my money  
b. She suffered terribly  
c. John is in the garden  
d. I owe you sixpence  
e. The hams hang from the ceiling  
f. The chalet sleeps six  
g. John got a shock  
h. Ariadne left

Only the last of these would fit without considerable difficulty this particular characterization. As Marache (1967: 292) observes: 'Définir le sujet comme point de départ de l'action a de toute façon l'inconvénient de ramener la fonction au sens de quelques verbes: ceux qui expriment l'action.' However, such an account, while avoiding such difficulties by assigning typically a complex value to nominatives, fails to explain the particular value the nominative has in any one instance. In other words, while it is true that, when we consider such a set of sentences as that in <sup>24</sup>(1), it is impossible to consider that all the subjects have the same semantic function, nevertheless in any one of these sentences (if we ignore the others) the function of the subject is much less ambivalent. Moreover, this proposal does not throw any light on what these diverse elements might have in common - what it is that merits the use of the term 'subject' - apart from



identity of superficial marker (positional or inflexional); nor does it explain why the 'actor-action' description is appropriate for very many active sentences (in English, at least - see Lyons, 1968a: par. 8.1.5). Such inadequacies follow, it seems to me, from a failure to appreciate that there may exist a complex relationship between the underlying semantic (case) relations and their superficial markers (case inflexions or prepositions), due particularly to that interaction with other semantic elements which our syntax will have to provide for.

This kind of failure, however, has also characterized (until very recently - see Fillmore, 1966a, 1968a, 1968b) most non-localist treatments of case - see e.g. de Groot, 1956, or the study of Redden's (1966) discussed by Fillmore (1968a: 8-9). And with respect to both positions, this weakened in particular the power of the generalizations concerning cases (as a feature of universal grammar and of particular grammars) that could plausibly be formulated (cf. Fillmore, 1968a: par. 1.2), and thus helped to earn for case grammars the scepticism of scholars like Jespersen (1924: ch. 12; 1930: ch. 30) and Bagell (1937). Consider too the debate concerning the semantic vs. the syntactic character of case(-inflexions) referred to by Moreux (1968: 31-2). Such considerations (concerning the inadequacy of attempts to characterize semantically case inflexions) also underlie in part, no doubt, the relegation of case to a very superficial position in 'traditional' transformational grammars (as Chomsky, 1965: ch. 4, par. 2.2).

Associated with this is the (possible) confusion resulting from the (well-established - cf. Baker, 1931) use of a single term to refer both to case(-relations) and case(-inflexions),



as embodied explicitly in the definition of Sonnenschein quoted in (1); part of the reaction against case-grammars is thus merely terminological. An early instance of such a reaction is represented by the remark of Meigret's quoted by Livet (1858: 70): 'Au regard des cas, la langue françoise ne les connoît pas, parce que les noms françois ne changent point leur fin.' Part of the debate between Sonnenschein (e.g. 1927: ch. 1) and Jespersen (e.g. 1924: ch. 13) is concerned with terminological appropriacy. However, the question of terminology is connected with the degree of 'abstractness' accorded to 'case'. I shall opt below for an 'abstract' view of case.

Despite such inadequacies in the formulation of localist case grammars in the past, it seems to me that, on the one hand, the study of case functions (whether marked inflexionally or otherwise) has been interestingly renewed (by particularly Fillmore (1968a)) within a framework that allows for a complex relationship between case functions and their superficial representation, and that, on the other, localist studies like those I have mentioned did progress sufficiently towards demonstrating common principles underlying 'spatial' and 'abstract' uses and both of these and 'syntactic' uses, to require the attention of any serious attempt to construct a grammar of grammatical functions (cf. Lyons, 1968a: 301-2). Even in such (for the most part) non-localist discussions as Kurylowicz's (1964: ch. 8) concerning the Indo-European case-system, the intricate superficial and historical relationships between the representation of 'concrete' and 'abstract' uses are well illustrated - and demand an explanation.<sup>1</sup> A localist conception of case inflexions

1. For a similar illustration with respect to prepositions, consider, for instance, Sastri, 1968.

(and prepositions) and case functions provides in principle an explanation for such, as well as (I am going to suggest) for various other synchronic and diachronic semantic and syntactic phenomena. Moreover, the effect of Fillmore's (non-localist) proposals, if accepted in the following respect, is to remove from consideration at the deepest levels those functions (the subjective and objective, in particular) which represent the most difficult problems with respect to a localist interpretation of case relations. That is, not only different levels of representation are allowed for, but also the traditional 'syntactic' cases, nominative and accusative (the subject and object markers) are to be regarded as (like the genitive) superficial neutralizations of distinct underlying cases (cf. Fillmore, 1968a: 49). Subjective and objective are not among the underlying cases; the non-local underlying cases are of quite a different order, and are thus (I shall suggest) rendered more amenable to a localist interpretation. I shall also argue in what follows that such a conception removes the difficulties noted above (~~in par. 1.34~~), and yet includes what is of value in the demi-localist position, by thus incorporating the 'syntactic' functions as superficial (though some kind of localist interpretation of the surface syntactic functions is not excluded). In sum, then, one of the things I want to argue for most strongly in what follows is that a more abstract view of case - taking this term as outlined in par. 1.1 to refer to grammatical relations contracted by nouns which express the nature of their 'participation' in the 'process' or 'state' represented in the sentence (or noun phrase) and which are represented superficially in various fashions, including inflexionally and by pre- and postpositions -



enables us to avoid some at least of the difficulties encountered by earlier studies, and yet to maintain an essentially localist standpoint.

In the following part, I shall attempt to show that four case categories can be distinguished. In Part III, evidence will be provided that various apparently distinct functions are subtypes of these four (particularly the locational ones); and it will be proposed that even the non-locational functions we have recognized are (a) characterized in opposition to the locational ones, and (b) separated by the same distinction. My intention is thus to attempt to support a rather strong form of the localist case theory. The survey of putative 'localist phenomena' we shall conduct is of course far from exhaustive and is intended merely as an illustration of something of the range of phenomena that a localist hypothesis would seek to relate. However, I would like to note that no case categories are envisaged for the clause additional to those that give the second and fourth chapters of the present work their titles; further distinctions can be accounted for in terms of features on these or by reduction ('casualization' ~~par. 2.424~~) of a nominal (beside, etc.).

Such a theory of case ought too to be relatable ultimately to the widespread (syntactical and lexical) relationships between 'concrete expressions' and what are usually referred to as 'metaphorical or figurative extensions' of such. Consider examples like Whorf's (1956: 146): 'I "grasp" the "thread" of another's arguments, but if its "level" is "over my head" my attention may "wander" and "lose touch" with the "drift" of it . . . ' However,



the extent of (such superficial representation of?) this would appear to vary from language to language, and take rather different forms (cf. Whorf, 1956: 134-59). But such a principle of extension of the concrete to the abstract seems to underlie such diverse phenomena as the Indo-European comparative (for a 'spatial view' of such, see Small, 1924: ch. 1) and the classification of verb stems in Navaho (see Landar, 1959: 303-6). An investigation is required of the synchronic relevance of such relationships; and there are obvious, testable ontogenetic and phylogenetic implications in such a view. A hierarchical relationship between 'concrete' and 'abstract' would argue for a non-innate status for such substantive universals as are involved. I <sup>would</sup> have, indeed, called the present work 'localistic' rather than 'localist', in that I would like to reserve the latter term for a stronger proposal than I shall present evidence for here, namely that not only are there common principles underlying spatial and non-spatial cases, but that also (as is implied by the preceding remarks) the spatial variant has ontological (and perhaps chronological - both short- and long-term) priority. My aim in the present context is more modest than this, and I shall not argue from such a position; but the direction such an argument might take is not difficult to discern. The time may not be too distant at which proposals of this kind will permit realistic evaluation, and indeed when concern with the origin, renewal and development of linguistic categories may be accorded the process of renovation recently granted to that other major focus of linguistic debate in the eighteenth century, the notion of 'universal grammar'.<sup>1</sup>

1. See further Anderson, forthcoming b.



PART II



BY THE

ROYAL

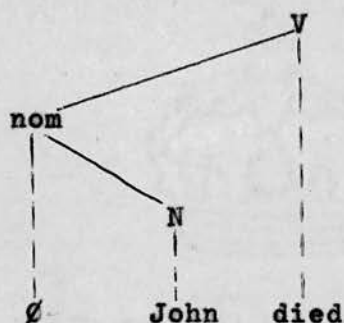
ACADEMY

## 2. Nominative and ergative

### 2.1. Preliminaries

Let us take as our starting-point the skeleton for II proposed in (21) in ch. 1. If no further cases are introduced and, of the relevant DRs, only II. ii. I is operative, then there is generated the structure underlying a clause like John died or John sneezed:

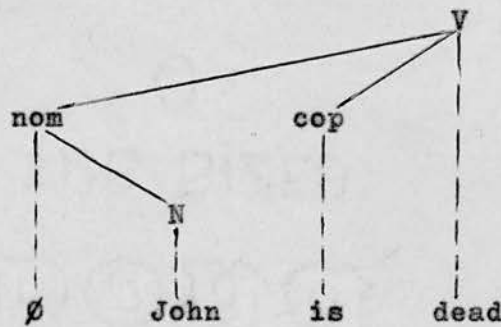
(25)



which involves a 'process' with a single 'participant' (cf. Lombard, 1929), which is moreover non-agentive - since there is, for instance, no normal imperative possibility (\*Die, John) outside specialized contexts - see further below. This single participant is governed by nominative, which term is used here for a semantic (case) element and is not to be confused with the label commonly used for the subjective (and predicative) case inflexion in languages like Latin. I am suggesting that nom is the notionally most neutral case. What is intended by this will only become clear, I think, as other cases are introduced, and we shall return to the question of characterizing nom in the following chapter, where I shall also be proposing that nom is the only obligatory case, in that the others may be absent from any particular clause: nom is introduced by a DR with V on the left, the others by one with a +feature.

However, before turning to this, I want to note that there is another kind of clause involving a single 'participant' but not a 'process' but rather a 'state' or 'quality' - i.e. which has a structure like that in (25) but in which V is +stative rather than -stative. Such are clauses containing 'adjectives' like John is dead. Apparently, we can associate with the selection of +stative (in English) a DR which introduces a cop(ula).<sup>1</sup>

(26)



Thus, I am assuming (with the more Aristotelian of the Arabic grammarians) that 'verbs' and 'adjectives' are categorially identical, and that they differ with respect to the feature +stative. We shall see below that, as cases other than nom are taken into account, the situation is somewhat more complex than this; however, this extension also provides evidence for categorial identity, in that in particular we shall find 'verbs' and 'adjectives' with parallel combinatorial possibilities with

1. No copula is necessary in, say, Navaho (Hoijer, 1959: par. 6), in which, even superficially, 'adjectives' are clearly a sub-type of V. We shall indeed (as noted below) have occasion to return to the relation between stativity and the presence of the copula below (particularly in pars. <sup>2.4 and 4.4</sup> ~~4.81~~ and <sup>ch. 7</sup> ~~6.42~~).

respect to cases, and entering into (intrinsically) suppletive sets.<sup>1</sup>

The rules necessary to allow for the relevant parts of the structures in (25) and (26) can perhaps be formulated as in (27):

(27)

- II. i.  $V \rightarrow \pm \text{stative}$ 
  - ii. 1.  $V \rightarrow \text{nom} // \rightarrow V$
  - 2.  $+\text{stative} \rightarrow \text{cop} // \rightarrow V$
- III. ii.  $\text{nom} \rightarrow N // \text{nom} \rightarrow$

The fact that II. ii. 2 is ordered after II. ii. 1 allows for the fact that cop immediately precedes V. The difference between (25) and (26) is attributable to the particular selection made in II. i, such that only in the case of (26) is II. ii. 2 operative.

Our fragmentary grammar will allow for clauses containing one case element nom, and it correlates the semantic opposition between stative and non-stative with the distinction between 'adjective' (V preceded by cop) and 'verb' (V without cop). It is now my intention to begin to introduce other case elements,

1. They constitute underlying (Aristotelian) rhémata (cf. Robins, 1966). See too Harris, 1751: 23-6; Beauzée, 1767: vol. 1, 403; Tooke, 1798-1805; de la Grasserie, 1914a: 32-5; the various accounts referred to by Hjelmslev (1928: 14, fn. 2). A somewhat similar position has been argued for, within more recent terms of reference, by, for instance, Lakoff, 1965: app. A; Lyons, 1966: 221-3; 1968a: par. 7.6.4; Fillmore, 1968a; Anderson, 1968a: 15-18; 1969c.



and to examine the viability of the +stative/'adjective' correlation with regard to clauses containing more than one case. This will involve us in the present section in a consideration of 'transitive' clauses, and in particular of the major subset of these which can be said to contain the case category ergative, which introduces the N that is regarded as the initiator of the 'action' associated with the V in such clauses.<sup>1</sup>

Such (ergative) clauses are those in (28):

- (28)    a. Egbert read the book  
         b. Egbert killed the duckling

but not those in (29):

- (29)    a. Egbert knew the truth  
         b. This bag contained the money

I want to suggest that the (superficial) subjects (but not the objects) in the clauses in (28) represent underlying ergatives, and that neither the subjects nor the objects in (29) are such. Let us consider, in relation to this suggestion, various sorts of phenomena that we can associate with the presence of erg(ative) as opposed to other cases, including in particular nom.

Notice first of all that the verbs that I am suggesting take (in 'active' clauses) an ergative subject (those in (28)) also appear in imperative sentences like those in (30):

- (30)    a. Read the book!  
         b. Kill the duckling!

1. Cf. Fillmore's (1966a, 1968a) 'agentive' (though we shall observe as the discussion proceeds that the correspondence is not complete).

(where presumably a vocative ergative subject (cf. e.g. Thorne, 1966) has been deleted). Whereas the sentences in (31):

- (31) a. \*Know the truth!  
b. \*Contain the money!

are somewhat peripheral, at best. (Even if we imagine a human subject for contain - The party contains two psycholinguists - a 'corresponding' imperative remains anomalous.) Further, 'intransitive' verbs like sneeze and die also do not permit the ordinary imperative possibility, but must be given special interpretations:

- (32) 1. a. Egbert sneezed  
b. Egbert died  
2. a. \*Sneeze!  
b. \*Die!

I am suggesting that such restrictions are related to whether or not the subject with the verbs is ergative; only read and kill take an erg as subject. Associated with this are other restrictions involving certain kinds of 'adverbial' like assiduously, which pattern like imperativization.

Another difference between the verbs in (28) and those in (29) concerns compatibility with 'progressive aspect': know and contain, like 'adjectives', do not normally appear in 'progressive' clauses,<sup>1</sup> and therefore are usually termed 'stative verbs' (cf. e.g. Godel, 1950). Thus:

- (33) 1. a. Egbert is reading the book

1. Cf. e.g. Goyvaerts, 1968a; Allen, 1966: apps.; and the works referred to therein.

- b. Egbert is killing the duckling
- 2. a. \*Egbert is knowing the truth
- b. \*This bag is containing the money

In this instance, the 'intransitive' are like the 'ergative' verbs:

- (34) a. Egbert is sneezing
- b. Egbert is dying

And this is also true with respect to certain of the question-answer restrictions exemplified in (35) - since, once again, all the questions demand 'non-stative' answers:

- (35) 1. What did Egbert do?
  - a. He killed the duckling
  - b. \*He died
  - c. \*He knew the truth
- 2. What happened to Egbert?
  - a. \*He killed the duckling
  - b. He died
  - c. \*He knew the truth
- 3. What happened?
  - a. Egbert killed the duckling
  - b. Egbert died
  - c. \*Egbert knew the truth

It seems to me that the type of verb exemplified by know emerges as distinctive enough to warrant detailed separate study of its syntax; and I shall be suggesting below (in chapter 5) that the character of this is connected with the presence (in associated underlying representations) of a particular case element. Such a three-way distinction, and its connexion with aspect, etc., has long been recognized; Velten (1931), for instance, attempts to trace Indo-European aspectual distinctions to an earlier three-term classification of verbs - into those

expressing 'physical or mental states' (hate) those representing 'transition between states' (die) and those representing 'action proper' ('caused by the volition of the subject' - seize). However, having established their distinctiveness, I want for the moment to lay aside clauses involving the 'stative' verbs,<sup>1</sup> and to examine in more detail phenomena connected with the other types of clause, which show an interesting overlap in the restrictions we have surveyed, and, as I shall suggest, other interrelations.

Thus, die and kill clauses have in common compatibility with 'progressive aspect' and appropriateness as answers to questions like that in (35. 3). They differ in that an imperative is unusual with die and that such a verb is inappropriate in the answer to (35. 1). We can associate these differences with the character of the subject - ergative with kill, nominative with die. This also accounts for the distinction in acceptability with regard to the answers in (35.2). But notice that both of the answers in (36) are appropriate:

- (36) What happened to the duckling? { a. It died  
b. Egbert killed it

as also is (37):

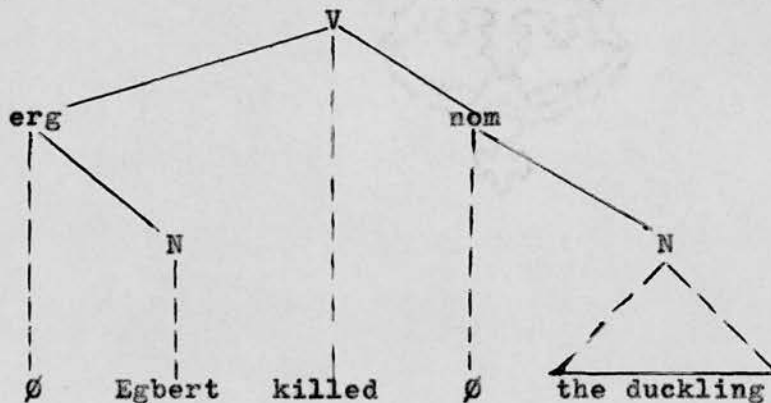
- (37) It was killed (by Egbert)

1. I shall also neglect here any examination of the nature of question clauses like those in (35). Their function in this and the following chapter will be merely 'diagnostic'.

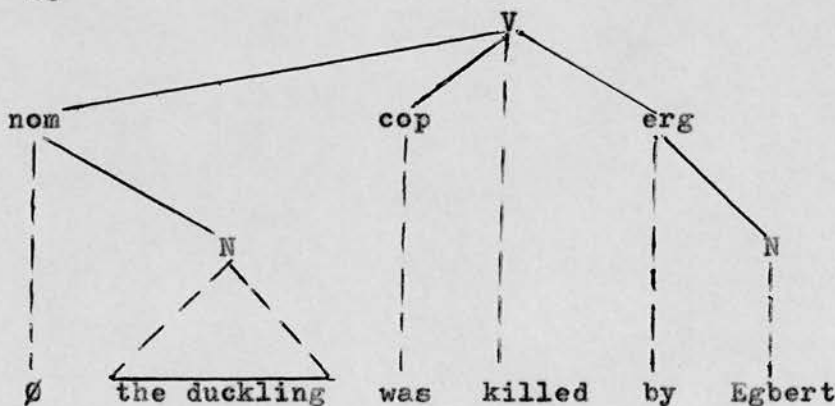


That is, the object in the active transitive clause and the subject in the passive appear to 'behave' in this respect like the subject in the intransitive clause. The semantic parallel is clear: in each case the referent of the N involved 'undergoes' the 'process' denoted by the V - as opposed to the subject of the active clause, which (as ergative) is the initiator of the 'process' - which indeed 'converts' the 'process' into an 'action'.<sup>1</sup> Accordingly, it seems reasonable to regard all these non-ergative Ns as sharing a case function - viz. nom. We might represent the (appropriate parts of the) structures underlying (36. b) and (37) as in (38. a) and (38. b), respectively:

(38) a.



b.



Whereas nom both before and after V (as subject or object) has no phonological representation, we find the preposition by as the marker of erg in those instances where it has not been con-

1. Compare Poutsma, 1926: ch. 47, pars. 10-11.

verted into the subject ('subjectivized').

We shall not be concerned here with the details of subject- and object-forming, except with regard to questions of sequence; it may be that for English something like Fillmore's (1968a: par. 3.5) rules for deleting the subject and object prepositions (and <sup>ad</sup> ~~sub~~joining the relevant N directly to V) are involved. However this may be, I shall regard the functions 'subject-of' and 'object-of' as 'neutralized relations' (Hofmann, 1969: 35), in that the nominals which come to contract these functions have diverse underlying case relations.<sup>1</sup> Such a notion of 'subject' and 'object' is closer to Chomsky's 'surface subject' and 'object' than to their 'deep' equivalents (where these are distinct). However, I shall for the moment assume that the rules placing case phrases in subject-position (e.g. (41) below) operate within II, i.e. before the development of NPs (see further below); and I shall not deal here in any systematic fashion with phenomena connected with what Halliday (1967: par. 4) calls the 'information structure' of the clause and Fillmore (1968a: 57) refers to as 'secondary topicalization' ('subjectivalization', which in general determines verbal concord, being regarded as 'primary') - i.e. particularly 'superficial' variations in 'word order', and presumably 'clefting' and intonational markers with a similar function.<sup>2</sup>

We have been discussing latterly a 'transitive' and an

1. Hofmann (1969: 52) associates the formation of subjects with the provision, within embedded sentences, of a 'slot from which things are deleted and into which they can be reconstructed.'
2. For some brief discussion, see ch. 8.

'intransitive' verb (kill and die) which one could regard as a quasi-suppletive set: kill differs from die only with respect to a feature like, say '+ergative'. And if we differentiate between those features of the verb which merely serve to introduce other elements like cases (and thus to subcategorize V with respect to these) and those features which are intrinsic to the verb (cf. Fillmore's (1968c) distinction between 'basic sense' and 'arguments'), then we can say that kill and die are intrinsically the same (or intrinsically suppletive). In many cases, we find a single item with a distribution equal to that of kill and die - as open, move, grow, etc. On the other hand, there appear to be 'ergative verbs' with no 'non-ergative' equivalent, and vice versa: perhaps read and sneeze are (respectively) examples of such. However, we can plausibly interpret read as like kill and sneeze as like die in the set of cases they require - though it should be noted that examples with read which would form natural answers in (36) and (37) are difficult to find. We shall indeed have to return below to an examination of the nature of the distinction between verbs like read and verbs like kill of which this restriction is a reflexion.

Let us add then to the rules proposed in (27) a subcategorization rule of the form of (39):

(39) II. i.  $V \rightarrow \pm \text{ergative}$

which serves to differentiate between clauses containing die and sneeze (-ergative) and those with kill and read (+ergative).

It is necessary now to consider the associated dependency rule, and also the character of the distinction between 'actives' and 'passives' - as represented in (38). We need to introduce into the grammar a dependency rule which inserts erg appropriately.



Erg, however, appears both before the V (in 'active' clauses) and after it (in 'passives'). Nom, conversely, is subject in 'passive' and object in 'active' clauses. And it is also subject in clauses in which erg does not appear - as He died. It seems best in such circumstances to leave rule II. ii. 1 (in (27)) as it is - i.e. introducing nom preverbally - and to propose a rule introducing erg post-verbally, with a subsequent (permutation) rule 'switching' nom and erg in active clauses. So:

(40) II. ii. 1. a.  $V \rightarrow \text{nom} // -V$

b.  $+ \text{ergative} \rightarrow \text{erg} // V -$

The structure represented in (28. a) is the result of the subsequent permutation; (28. b) is unpermuted.

## 2.2. Ergative clauses

Despite the arguments for post-verbal introduction of erg, it seems to me that the sequence in (28. a) is in some sense less 'marked' than that in (28. b) - and most past treatments of 'passives' have indeed interpreted them as more complex than the corresponding 'active' clause (see e.g. Katz & Postal, 1964: par. 4.2.1). This suggests that if we maintain (for the above reasons) that the underlying sequence is as in (28. b), then the permutation rule ought to be so formulated as to operate unless certain conditions are met: non-operation of the permutation should emerge as the marked possibility. And this is supported by certain further considerations concerning the structure represented in (28. b). Notice in particular that (28. b) is also superficially more complex in containing cop (which is lacking in (28. a)). Perhaps then we can associate the operation of the permutation with the absence of cop, such that the rule could be formulated as in (41):



(41)  $\text{nom} + \alpha + V + \text{erg} \rightarrow \text{erg} + \alpha + V + \text{nom}$

CONDITION:  $\alpha \neq \beta + \text{cop} + \gamma$

( $\alpha$ ,  $\beta$ , ... are variables over any (including the null) subsequence). The condition requires the operation of the rule unless cop has been introduced. I shall assume that the rule in (41) belongs to II. iii, i.e. precedes the rules for N, though the evidence so far presented for this is perhaps not very strong (though the development of subjects and objects appears to be presupposed by the rules allowing for different kinds of embedding (see Reich, 1969) - and otherwise cf. Anderson, 1968a: 19-21).

Observe that this account, despite the intention of (41), suggests a post-verbal position as 'neutral' for erg, a decision which (in itself) it would be difficult to motivate. An alternative is to introduce erg preverbally. However, if a pre-verbal position is retained for nom, we would then have to substitute two (albeit simpler) rules for that in (41), one to postpose nom in actives, the other erg in passives. Moreover, how is the relative underlying (pre-verbal) sequence of erg and nom to be selected in a non-arbitrary fashion? We shall return to a proposal for a rather more radical solution to these problems in Part III.

The representation in (28. b) embodies another claim which we shall have to discuss at this point. Both the be which appears in 'passive' clauses (like (28. b)) and the one which appears before 'adjectives' are interpreted as representing a single category, cop. In view of the considerable parallelism with respect to superficial syntactic 'behaviour' between them (see

Anderson, 1968a: 14-16), and despite one traditional preference (which e.g. Lees (1960: 6, 34) incorporates) for deriving the two instances of be in rather different fashions, this seems just; and it enables us to avoid suggesting that the occurrence of be in both these environments is merely 'accidental'. However, it is necessary then to investigate whether this represents a deeper (semantic) parallelism, in that, in particular, a single subcategorization selection underlies the presence or absence of cop. I want to suggest that this is indeed the case and that cop is in both cases introduced by rule II. ii. 2 in (27), which inserts cop before a +stative V. I shall propose further below that other instances of be (as in John was in the garden) are also related to +stative and that the derivation of 'progressive aspect' involves a sub-type of such (locative) clauses). Thus, ±stative is simultaneous with ±ergative.

$$(42) \quad \text{II. i. } V \rightarrow \begin{bmatrix} \pm\text{ergative} \\ \pm\text{stative} \end{bmatrix}$$

Despite the above interpretation of cop, it is clear that only the 'short form' of passive clauses can have a semantically 'stative' interpretation - and this is true of only some of these. Thus, a clause like (43. a), containing a 'short passive':

(43) a. The lights were dipped

b. The lights were dipped by the oncoming driver

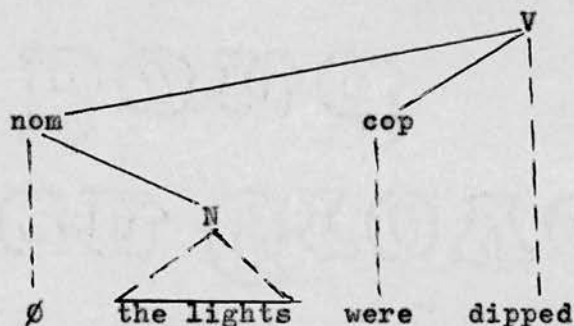
is (as has often been noted in the past - see e.g. Kruisinga, 1931: 38-40; Hasegawa, 1968: par. 3) ambiguous between 'stative' and 'non-stative', whereas the 'long passive' (43. b) is unambiguously 'non-stative'. Only the 'non-stative' version has a

corresponding 'progressive':

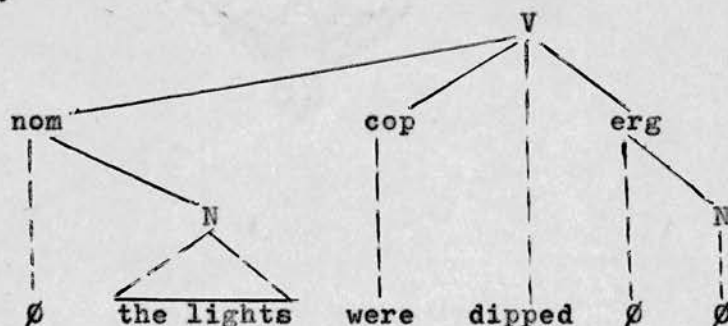
(44) The lights were being dipped (by the oncoming driver)

Compare here the distinction drawn by Chanidze, with respect to Georgian, between 'static' and 'non-static' passives (Lafon, 1963), the former being limited, as (less markedly) in English, to certain verbs. I suggest that the 'non-stative' version of (43. a) involves a deleted ergative phrase, and that the 'stative' one is like a simple 'adjectival' clause in lacking such. The two structures can be represented as in (45) - the a instance being 'stative' and the b 'non-stative':

(45) a.



b.



Henceforth, I shall regard instances like (45. b) as shortened forms of 'long passives'; only examples like (45. a) will be referred to as 'short passives'. It would seem then that if we are to maintain the position that the introduction of cop is

always related to +stative, we must allow for the 'stative' character of +stative to be 'overruled' by co-selection of +ergative: only when erg is absent is a clause containing cop semantically 'stative'.<sup>1</sup> And we shall see below that we appear to have to allow for this anyway in the case of certain 'adjectives'.

If such a position is accepted, then (the relevant aspects of) both 'active' and 'passive' ergative clauses are allowed for by adding the rules in (39) (as part of II. i), II. ii. 1 b in (40) and (41) to those proposed in (27). However, we must now take account of the fact that there are 'intransitive' clauses which nevertheless appear to partake of certain of the characteristics of 'transitive' clauses with ergative subjects. Compare with the examples in (31) and (35) those in (46):

(46) 1. a. Work!

b. Leave!

2. What did Egbert do?

a. He worked (harder)

b. He left

(Cf. too Egbert is working, Egbert is leaving.)

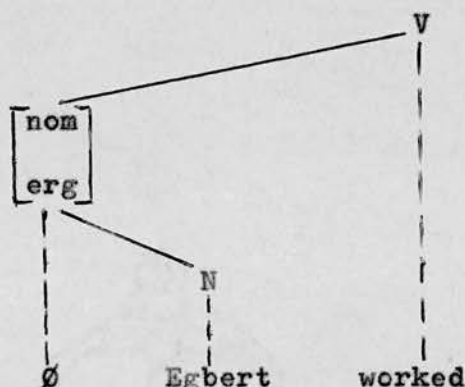
1. This notion of 'over-ruling' can perhaps be supported with respect to a concept of hierarchy for semantic elements like that proposed (Lass, 1971) for the phonetic features. It would also seem that if the 'stative' character of +stative is 'over-ruled', then it becomes available as a 'topicalizing' feature permitting subject position to nom in ergative clauses. However, this looks like a statement of a diachronic rather than a synchronic process; and it thus perhaps suggests an inadequacy in the present account. We shall return to this question in Part III.



(Cf. too Egbert is working, Egbert is leaving.)

I propose that these be allowed for by introducing a rule which attaches erg to nom in such cases, producing structures like that in (47):

(47)



Ergative clauses can thus be either reflexive or non-reflexive: if they are reflexive, then erg is attached (as in (47)) to nom; if they are non-reflexive, it is introduced as a separate category (as in the regative clauses we looked at above - see particularly (38) and (45. b)). Thus, (48. a) is reflexive, and (48. b) is not:

(48) a. Egbert moved

b. Egbert moved the couch

(Clauses with move can also, of course, be -ergative.) Egbert moved himself is a non-reflexive ergative clause which contains a reflexive nominative N. That is, I am distinguishing between clausal and phrasal reflexives. This enables us to reflect the fact that in reflexive ergative clauses the agent 'operates' in some sense upon itself, without our having to suggest that all such clauses contain deleted (reflexive) nominative NPs.<sup>1</sup> This

1. Cf. Huddleston, 1970; and, for further examples, see Vendryes, 1932.

latter proposal might be appropriate in the case of (48. a) - though it would leave unexplained the difference between this and the clause with overt reflexive pronoun - but appears to be much less plausible in the case of, say, work or leave. A predication like Egbert worked himself hard is indeed semantically very unlike the clause in (47).<sup>1</sup> We shall return to a proposal for an explanation of this below.

Such considerations underlie the adoption of the proposal embodied in (47) rather than an alternative one in which nom would be absent from such clauses (cf. Fillmore, 1968a: particularly par. 3). Nom is thus universally present (as implied by rule II. i. 1. a). It is clear anyway that nom (cf. Fillmore's 'objective') is rather unlike the other cases in other respects also. Fillmore (1968a: 25) describes the 'objective' as follows:

(49) ...the semantically most neutral case, the case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb ...

This uniqueness is characterized (with respect to the present account) in terms of the unique status of nom as a case element that is universally present in the clause.<sup>2</sup>

1. See further Anderson, 1968a: postscript.
2. One possible kind of exception is represented by It's hot in this room, with an 'expletive' subject - cf. This room is hot, with locative subject. If this analysis is accepted, then apparently nom is optional (in locative clauses, at least). However, it may rather be that the subject in the former sentence represents an underlying (though perhaps 'empty') nom (i.e. it has ...

Let us consider now the nature of the rules necessary to allow for the distribution of nom and erg in the manner I have suggested. Nom is already adequately allowed for. The requirement is to provide for erg to be introduced both as a separate category and as a feature on nom. I propose in this connexion the following rules, intended to characterize the notion 'clause reflexive':

(50) II. i. 2. +ergative  $\rightarrow$   $\pm$ reflexive

ii. 2. b. +ergative  $\rightarrow$  erg //  $\left\{ \begin{array}{l} \left[ \begin{array}{c} \text{nom} \\ \hline \end{array} \right] / \left[ \begin{array}{c} \hline \\ +\text{reflexive} \end{array} \right] \\ \text{V-} \end{array} \right\}$

In terms of (50), ergative clauses (like certain NPs) can be +reflexive or -reflexive. If they are +reflexive then erg is added to nom; if not, then it appears as a separate category after V. In rule II. ii. 2. b in (50) we thus have two sorts

of environment indicated:  $\left[ \begin{array}{c} \text{nom} \\ \hline \end{array} \right]$  and 'V-' indicate the

(alternative) environments into which erg is introduced;

... a structure like (in this respect) that for The temperature is high in this room), whereas the nom of the latter has been deleted and the loc subjectivized. So too 'weather' clauses - cf. Postal, 1966b: 98, fn. 8. See the discussion in Anderson, forthcoming a. However, it may indeed rather be that we should allow for clauses which contain only either nom or loc; this would not be unnatural in terms of the relationship (between nom and loc) suggested in Part III.

' $\left[ \begin{array}{c} \text{---} \\ +\text{reflexive} \end{array} \right]$ ' is a 'left-hand side' environment - it indicates

the context for +ergative in which erg is added to nom. '+reflexive' does not appear itself on the left of a DR; its function in such is to allow for alternative placements of erg. These rules provide for 'clause reflexives'. Further rules for N involving +reflexive will allow for 'phrasal reflexives'. Rule II. ii. 2. b in (50) is a revised version of rule II. ii. 1. b in (40). The re-ordering (from ii. 1 to ii. 2) is necessary because 'nom' has now been introduced into the rule as an environment, and thus must have been already inserted (by II. ii. 1). These additions to the grammar will provide for the structure in (47) suggested for Egbert worked. We must consider rule II. i. 2 more closely below, in particular with respect to whether it operates independently of whether the V is +stative or -stative. For the moment, I want to consider how the distribution of erg and nom is reflected inflexionally in various languages.

### 2.3. The morphological representation of erg and nom in various languages.

We have allowed within our rules for three possible combinations of the cases nom and erg: nom appears alone; nom and erg form co-components of a single CS; nom and erg occur as separate categories. Different aspects of these combinations appear to be relevant to determining the shape of the surface markers of the cases and the nature of verbal concord in different languages.

Thus, in Basque and other so-called 'ergative languages',



erg as category has a distinct shape from nom (whether with erg attached or not), and verbal person-number concord also operates on this basis. Consider the following examples, adapted from Lafitte, 1962:

- (51) 1. Gizonak ogia jan du ('The man has eaten some bread')  
 2. a. Gizona ethorri da ('The man has come')  
 b. Ogia ona da ('The bread is good')

Here the -k suffixed to gizona in (51.1) is the marker of the ergative category; the other instances of nominals (ogia in 1 and 2.b, gizona in 2.a), as nominatives, lack the -k. On verbal concord, which shows a similar distinction, see e.g. Martinet, 1958; Anderson, 1968a: 9-10. A similar situation is attested in a number of other languages, including (to take something of a geographical sample) Tibetan, Eskimo, Samoan and Chinook.<sup>1</sup> Various scholars indicate the further relation between the ergative marker and (one type of) the 'genitive' - a connexion we shall be unable to explore at this point.<sup>2</sup> See further, however,

1. For examples and discussion, see for instance Matthews, 1953: 404-5; Lyons, 1968a: par. 8.2; on Tibetan, etc., Maspero, 1947-8; on Eskimo, Pott, 1873: 89-94; Jespersen, 1924: 166; Finck, 1930: par. 3; Thalbitzer, 1930; Velten, 1932b: 217-21; Erichsen, 1944; Hill, 1958: App. A, par. 8; on Chinook, Boas, 1911: pars. 15, 16 and 18; on Basque, Uhlenbeck, 1907a; 1949; Lafon, 1960; Martinet, 1962b. On the Caucasian group, see Čikobava, 1969, and the works referred to therein. See too the examples and references in Anderson, 1968a: 11, fn. 12.
2. See, however, de la Grasserie, 1890: 12-13, 65-6; ...

ch. 7.

The labels 'ergative' and 'nominative' are usually used with respect to such an inflectional (and concord) system; alternative terms are 'actif'/'nominatif' (Lafitte, 1962), 'agens'/'patients' (Troubetzkoy, 1929), 'casus activus' (or 'transitivus')/'casus passivus' (or 'intransitivus') (Jespersen, 1924: 166), 'casus energeticus'/'casus inertiae' (Uhlenbeck, 1916a). However, Uhlenbeck's distinction represents a conflation of the sort of system we have been discussing so far and another in which any case CS containing erg, whether as category or feature, is represented differently from nom (without erg attached) - as appears to be the case in Dakota, for instance.<sup>1</sup> Consider the Dakota examples in (52) (taken from Boas & Swanton, 1911):

... 1901: 1-13; 1914a: 34-45; Schuchardt, 1921; Lewy, 1928; on Eskimo, Hammerich, 1951; Sauvageot, 1953; Schmitt, 1956; Mey, 1970; on Tibetan, Eskimo and Indo-European, Hammerich, 1956 (see too Jespersen, 1924: 166); on Indo-European, van Wijk, 1902; on Basque, Naert, 1956. Cf. too discussions like Müller, 1876: particularly 123-5; Winkler, 1889: 96-100; these are concerned with the development of the so-called 'objective' conjugation (cf. p. 67, n. 1).

1. And Sapir (1917a) takes Uhlenbeck (1916a) to task for conflating the two distinctions in pursuit of his - and Uslar's and Schuchardt's (cf. e.g. 1905-6) - 'passive nature of the transitive verb' hypothesis. On this cf. Fillmore, 1968a: par. 4.4. For further discussion of this distinction, see too Anderson, 1970b.

- (52) 1. a. oma'hi'hpa'ya ('I fall into' - Teton Dialect)  
       b. maya'k'te ('You (sg.) kill me' - Santee dialect)  
    2. a. éowapa ('I wade' - Santee)  
       b. wakaksa ('I cut off' - Santee)

in which ma in 1 represents the first person 'inactive' (Boas & Swanton's 'objective' form), and the wa in 2 the first person 'active' (Boas & Swanton's 'subjective'). ('Stative' verbs take the 'objective' form: masi'ca ('I am bad').)

Other possible relationships between (particularly pronominal) inflexional distinctions and underlying cases are noted (with respect to various Amerindian languages) by Sapir (1916a: particularly 86) and, following him, Fillmore (1968a: par. 4.1). For instance, there are languages like Takelma in which the nom in 'intransitive' clauses (with erg attached or not) is represented differently from both erg and nom in 'transitive' clauses, which are in turn distinct from each other. Thus, for example, we find in Takelma (according to Sapir, 1922: 284) the following distinct first person singular aorist forms:<sup>1</sup>

- (53) 'intransitive': -t'e<sup>e</sup>  
       'subjective transitive': -(a')<sup>e</sup>n  
       'objective transitive': -xi ('subject' in 'passives')

Clearly, in other languages (like Yana) there are no nominal inflexional distinctions attributable to the distribution of nom and erg, or even more superficial case distinctions. In yet others, the determining factors are rather the distribution into subject

1. For discussion and full exemplification, see Sapir, 1922: pars. 59-67.



and object: in English, for instance, there is a separate pronominal form (in most instances) for subjects from that we find elsewhere (with the possible exception of predicatives), and verbal concord presupposes this division. That is, pronominal morphology is determined after and with respect to the results of subjectivization.

English also reveals that more than one inflexional system may co-exist in a single language, in that no such distinction is drawn between non-pronominal subjects and objects. In Navaho (see Hoijer, 1964: 147-8), the pronominal prefixes to the verb are distinguished as subjective or objective, whereas the verb classification system operates with respect to the nominative N, whether subject (in intransitive clauses) or object (in transitive). Sapir (1916a: 84-5) comments on co-existing inflexional systems within various other Amerindian languages. And certain of the Caucasian languages (e.g. Georgian) show an alternation between a subject-object system and an ergative-nominative one, in accordance with 'tense' differences.<sup>1</sup> Consider the following Georgian examples cited by Sommerfelt (1937: 183):

- (54) a. Kaci h-klav-s megobar-s ('The man kills his friend')  
b. Kac-ma mo-kla megobari ('The man killed his friend')

In the present tense (a), kaci ('the man') is in the 'nominative' and 'his friend' in the 'dative'/'accusative'; in the aorist (b), megobari ('the friend') is in the 'nominative' and 'the man' is what Vogt, for instance, refers to as the 'narrative' and what others have called the 'ergative' (though verbal concord operates

1. See e.g. Schuchardt, 1896; Sommerfelt, 1937; Tagliavini, 1937; Vogt, 1938.



as for (a)).<sup>1</sup> It has also been suggested<sup>2</sup> that although Indo-European, as usually reconstructed, shows a subject-object inflexional system, there are signs (e.g. in the system of gender) that at an earlier period the inflexions may have been (in the relevant respect) more Basque-like. (However, 'ergative constructions' in various of the Indo-European dialects seem to be attributable to the influence of other languages<sup>3</sup> - in those cases where indeed it is reasonable to interpret the phenomena involved as such.)

In sum, the relationship between the underlying distribution of nom and erg and surface inflexional distinctions, verbal concord, etc. is a complex one. And there are further complications of a somewhat different nature from those we have been considering. In Basque, for instance, it is not merely underlying ergs that

1. The further alternation in Georgian, whereby, in the perfect, 'the man' would be in the 'dative' and 'the friend' in the 'nominative', is relateable to the derivation of such 'tenses' from underlying locative clauses - see chapter 7, and cf. e.g. Meillet, 1924; Finck, 1930: par. 9; Benveniste, 1952; Allen, 1964; Lyons, 1968a: par. 8.4.6; for a convenient summary, see Lafon, 1963. On 'affective' verbs, which show a rather different distribution of case inflexions, see ch. 5.
2. Though still controversially - cf. e.g. Uhlenbeck, 1901, 1907b; Finck, 1907; Velten, 1932a: 268, 1932b: 218-22; Vaillant, 1936; Lehmann, 1958: 190. For a concise account, see Martinet, 1962a: 149-54.
3. Cf. Pedersen, 1906; Zubatý, 1906; Velten, 1932b; Matthews, 1953; Laroche, 1962; Benveniste, 1962.

are represented by the -k inflexion but also underlying animate locatives (datives) that have at some stage been converted into ergs (just as different cases may be subjectivized).<sup>1</sup> The surface inflexional reflexion of nom and erg is thus usually interconnected in various ways with that of other cases (particularly the dative) as well as with (and often as a result of) the process of subjectivization and objectivization, the 'neutralizing' effect of which was mentioned above. Systems of inflexion and concord accordingly provide only rather indirect indications of the underlying distribution of cases, though clearly we must require of a theory of case relations that, together with certain other relevant considerations, it should enable us to account for such systems in a natural way. It seems to me that, although we have not explored this explicitly, the account I have outlined above (in pars. 2.1 - .2) will in principle allow for the sorts of variation in inflexional systems that we have briefly surveyed in (par. 2.3).

#### 2.4. Stative ergative clauses

I have argued for the introduction of rule II. i. 2 in (50) (distinguishing between reflexive and non-reflexive ergative clauses) with regard to -stative clauses. We must investigate whether the rule must be so restricted (i.e. to  $\left[ \begin{array}{c} +\text{ergative} \\ -\text{stative} \end{array} \right]$  clauses) or whether it is appropriate to +stative clauses also. We have associated 'adjectives' (if we include the 'verb' in 'short passives' (43. a)) with the selection of +stative and -ergative;

1. Cf. Anderson, 1969c: fn. 5; and the discussion in Part III.

and this underlies the absence (under the normal interpretation) of 'progressive aspect' with items like dead, as compared with die or work:

(55) \*He was being dead

Notice however that certain 'adjectives' do permit normal 'progressive' forms - as in (56. b):

(56) a. Egbert was cautious

b. Egbert was being cautious

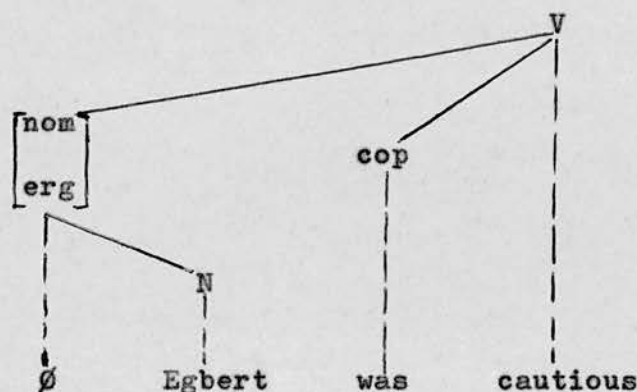
How are we to account for this? The clauses in (56) still contain the be we have associated with +stative, yet notionally and syntactically they are 'non-stative'. But notice that we have already encountered such a situation in the case of 'long passives'. They contain cop (introduced as a result of the selection of +stative in rule II. i. in (27)), and they also are nevertheless notionally and syntactically 'non-stative'. We associated this in their case with the co-selection of +ergative (which 'overrules' +stative in these latter respects - though not blocking the introduction of cop). This suggests that erg is also present in clauses like those in (56), and is presumably attached to nom: the clause is +reflexive. That is, we can account for such clauses by an extension of rule II. i. 2 in (50) to +stative clauses. It can remain in the more general form it is stated in there, and need not be limited by adding -stative to the left-hand-side specification:

(50) II. i. 2. +ergative  $\rightarrow$  +reflexive

Accordingly the relevant structure underlying (56. a) can be

represented as in (57):

(57)



This interpretation is supported by the fact that we find such adjectives in imperative clauses:

(58) Be cautious!

which again suggests that they have an ergative subject. Note too that He was cautious is appropriate as an answer to both What did Egbert do? and What was Egbert like? Certain adjectives (curious, suspicious) can be ambiguous between a 'stative' and a 'non-stative' interpretation - i.e. (in terms of the present proposal) with respect to whether erg is present or not - as in He is a suspicious old man.<sup>1</sup> Thus, Egbert killed the duckling is

1. Observe however that a clause like Joe is being sick (in British English) appears not to be accountable for in this way: \*Be sick. But this is idiosyncratic in other ways, in that (in particular) the notional relation between Joe is being sick and Joe is sick is not simply that of 'progressive' to 'non-progressive' (however this is characterized). There are further exceptions to the association of 'non-stative' copular clauses with the presence of erg if one has to allow for 'pseudo-passives' (Mihailovič, 1967) as distinctive.



-reflexive and -stative, The duckling was killed by Egbert  
 -reflexive and +stative, Egbert worked +reflexive and -stative,  
 and Egbert was cautious +reflexive and +stative. They are all  
 +ergative.

However, consider now the pair in (59):

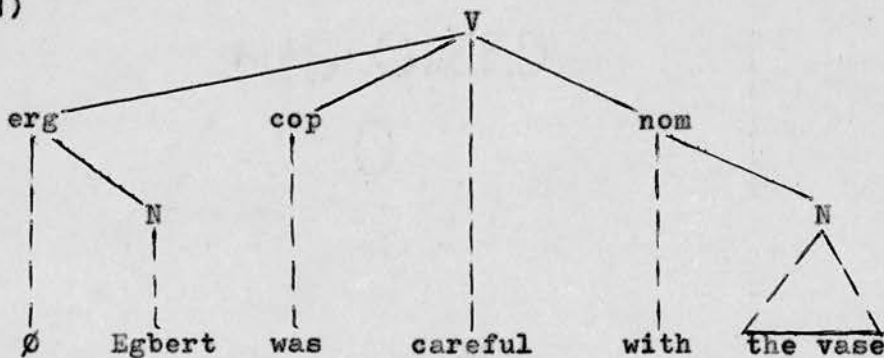
- (59) a. Egbert was careful with the vase  
 b. Egbert was being careful with the vase

These are notionally and syntactically 'non-stative', and once  
 more nevertheless contain the cop introduced as a result of the  
 selection of +stative. Notice too the imperative possibility  
 represented in (60):

- (60) Be careful with the vase!

Once again it would appear that the subject in such a clause is  
 ergative. Indeed, it seems not unreasonable to regard (59) as  
 the 'transitive' equivalents of (56): compare the 'intransitive  
 use' in Be careful! That is, the structure underlying (59. a)  
 might be represented as in (61):

- (61)



(in which post-'adjectival' (as opposed to post-'verbal') nom  
 has not been objectivized and is represented as with (cf.

Fillmore, 1966a)). But let us reflect on the consequences of adopting the structure in (61) as appropriate for (59. a). Presumably the clause is +ergative (to account for the presence of erg), -reflexive (erg is not attached to nom) and +stative (cop has been introduced). But this is precisely the specification for 'long passives'. Yet clauses like (59. a) differ from 'long passives' in the items that manifest V, and in particular in the relative sequence of erg and nom. It would appear that in (59) something like rule (41), which permutes nom and erg, has operated; however, the condition for the operation of (41) is not met, in that cop is present before the verb. Presumably, whatever it is in the specification underlying (59. a) that differentiates it from a 'long passive' is also associated with the sequence of nom and erg in (61).

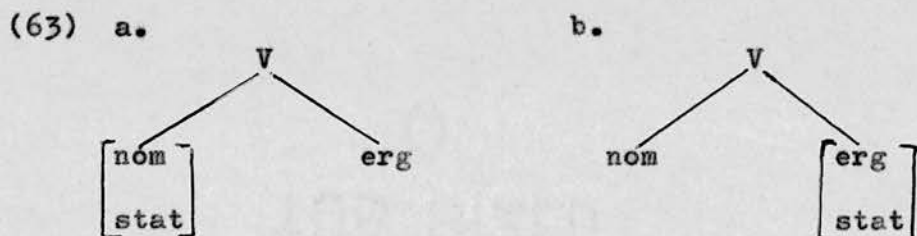
These facts can be accounted for in terms of a modification to the rules which will receive some further support in ch. 4. I suggest that +stative does not introduce cop directly, but rather adds to a case element a feature, stat. Cop is then introduced before V only when the subject case is marked as stat.<sup>1</sup> Further, rule (41) will be reformulated to operate unless the CS containing nom also contains stat - so:

(62)  $\text{nom} + \text{V} + \text{erg} \rightarrow \text{erg} + \text{V} + \text{nom}$

CONDITION:  $\text{stat} \neq [\text{nom}]$

1. We shall find in chapter 4 instances where a clause though +stative, nevertheless does not contain cop; and I shall associate this with the post-verbal position of the case which has stat attached.

(where the condition is to be interpreted as stating that the rule is operative unless stat is included in the same CS as the nom in the structure index on the left of the arrow). To exploit this, I am proposing that the structures underlying a 'long passive' and a clause like (59. a) can be represented as in (63. a) and (63. b) respectively:



Thus, in the case of the 'long passive' ((63. a)) the condition for rule (62) is not met, and no permutation takes place; whereas in (63. b), in which stat is attached to erg rather than nom, the condition is met, and the sequence represented in (61) results.

What is required now is a rule introducing cop after a subject case which is marked as stat. If we order this rule after (62) then in both the 'long passive' and the 'transitive adjective' instances cop will (correctly) be introduced. We can number rule (61) as II. iii. 1; and the rule introducing cop will be II. iii. 2:

(64) II. iii. 2. stat + V → stat + cop + V

(I.e. any subject case CS containing stat will have cop introduced after it.) As I have mentioned, further instances supporting such a (more devious) interpretation of the introduction of cop will be discussed in ch. 4. However, it is worth indicating at this point that the fact that cop is introduced only 'indirectly', via a TR dependent on pre-verbal stat, is perhaps in itself a

pleasing consequence, since clearly the introduction of cop in such sentences is not a universal feature of language. (Consider those languages (like Japanese or Navaho) in which there is no distinction of this sort between 'adjectival' and (active) 'verbal' clauses.) Therefore, it seems appropriate that cop is not introduced directly in the semantic subcomponent (whose degree of universality is thus enhanced) but as a consequence of the operation of various TRs. In terms of these proposals, 'adjectives' in English are that sub-class of V which appears after cop in the absence of a following erg; this includes those items that occur in 'short passives'.

It remains to allow for the distribution of stat as a feature either on erg or nom. This can be accomplished by rules analagous to those providing for the placement of erg. In clauses which are -reflexive and +stative, there are two places in which stat can appear: I shall introduce a feature  $\pm$ oblique which determines this. So:

$$(65) \text{ II. i. 3. } \left[ \begin{array}{c} \text{-reflexive} \\ \text{+stative} \end{array} \right] \rightarrow \pm\text{oblique}$$

(which must be ordered, as indicated, after the rule involving  $\pm$ reflexive). The relevant DR can be formulated as in (66):

$$(66) \text{ II. ii. 3. } +\text{stative} \rightarrow \text{stat} / \left\{ \begin{array}{l} \left[ \begin{array}{c} \text{erg} \\ \text{---} \end{array} \right] / \left[ \begin{array}{c} \text{---} \\ \text{+oblique} \end{array} \right] \\ \left[ \begin{array}{c} \text{nom} \\ \text{---} \end{array} \right] \end{array} \right\}$$

(in which, once again (cf. '+reflexive'), '+oblique' does not introduce an element directly, but merely serves as a left-hand



side environment). In this case, the ordering is determined by the fact that erg is required as an environment.

## 2.5. Conclusion

Let us indeed reformulate at this point the partial grammar whose development forms a major aim of our discussion, incorporating the various modifications that have been proposed in the course of the present chapter.

$$(67) \text{ II. i. 1. } V \rightarrow \begin{bmatrix} +\text{ergative} \\ +\text{stative} \end{bmatrix}$$

$$2. +\text{ergative} \rightarrow +\text{reflexive}$$

$$3. \begin{bmatrix} -\text{reflexive} \\ +\text{stative} \end{bmatrix} \rightarrow +\text{oblique}$$

$$\text{ii. 1. } V \rightarrow \text{nom} // -V$$

$$2. +\text{ergative} \rightarrow \text{erg} // \left\{ \begin{array}{l} \begin{bmatrix} \text{nom} \\ - \end{bmatrix} \\ V- \end{array} / \begin{bmatrix} - \\ +\text{reflexive} \end{bmatrix} \right\}$$

$$3. +\text{stative} \rightarrow \text{stat} // \left\{ \begin{array}{l} \begin{bmatrix} \text{erg} \\ - \end{bmatrix} \\ \begin{bmatrix} \text{nom} \\ - \end{bmatrix} \end{array} / \begin{bmatrix} - \\ +\text{oblique} \end{bmatrix} \right\}$$

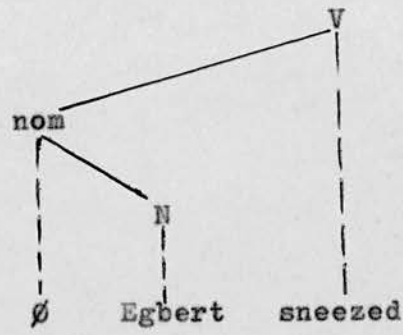
$$\text{iii. 1. } \text{nom} + V + \text{erg} \rightarrow \text{erg} + V + \text{nom}$$

$$\text{CONDITION: } \text{stat} \notin [\text{nom}]$$

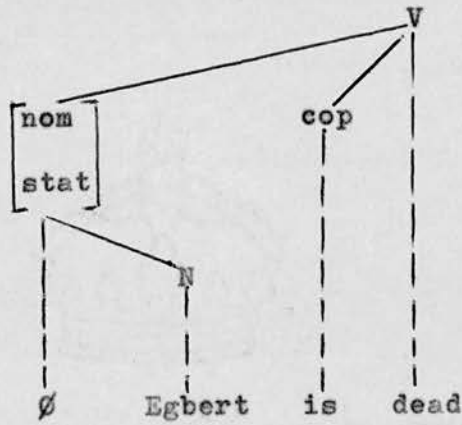
$$2. \text{stat} + V \rightarrow \text{stat} + \text{cop} + V$$

The range of structures allowed for by these rules is likewise represented in (68):

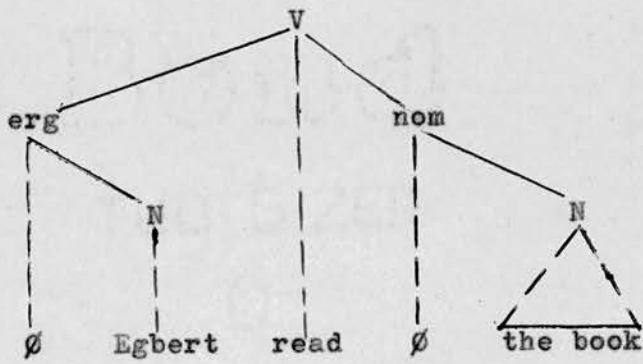
(68) a.



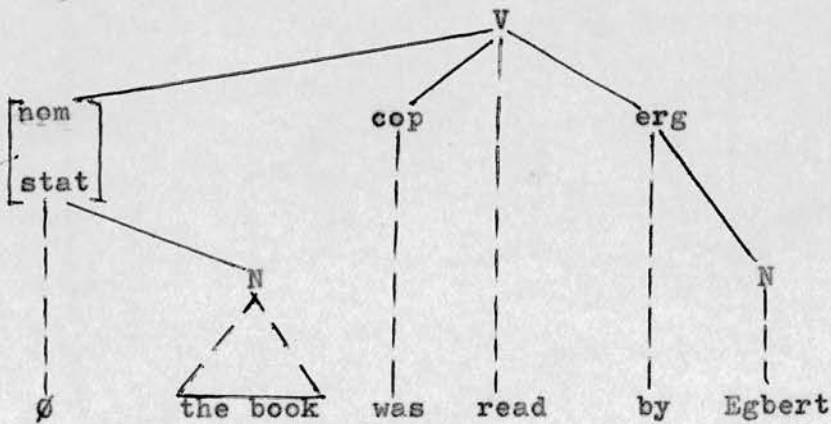
b.



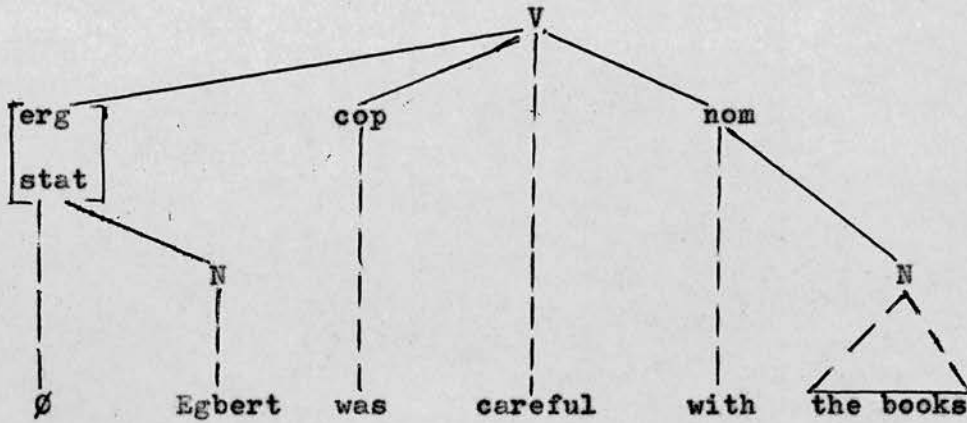
c.



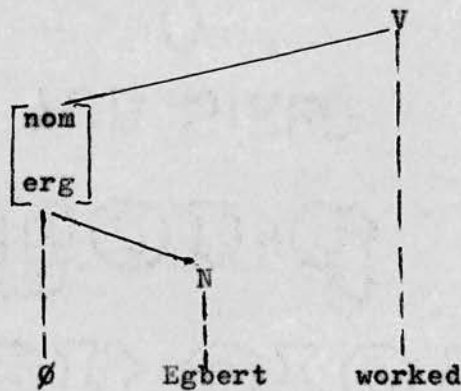
d.



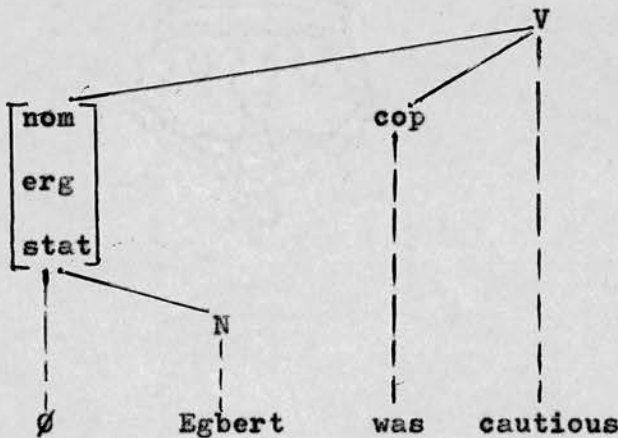
e.



f.



g.



It is perhaps also potentially of interest - though the drawing of any firm conclusions would clearly be premature - that the structures in (68) in whose derivation most positive terms are selected (i.e. e and g,

$\left[ \begin{array}{l} +\text{ergative} \\ +\text{stative} \\ -\text{reflexive} \\ +\text{oblique} \end{array} \right]$	and	$\left[ \begin{array}{l} +\text{ergative} \\ +\text{stative} \\ +\text{reflexive} \end{array} \right], \text{ respectively)$
---	-----	--

are also those which seem intuitively to me to be semantically the most 'marked'.

### 3. Causatives

#### 3.1. Two kinds of 'transitive' verb

I would like now to turn to certain distinctions in 'verbal' clauses containing *erg* which we have so far failed to take account of. Clauses with kill and read have been provided with the same kind of derivation in terms of the rules in (67); I have associated with both verbs structures like those in c and d in (68). However, there are reasons for thinking that though they may have this much in common, we are dealing with two systematically different sub-classes of verb. Notice first of all the rough indication of difference provided by our question-answer frames:

- (69) What did Egbert do to the book?  $\left\{ \begin{array}{l} \text{a. He damaged it} \\ \text{b. *He read it} \end{array} \right.$

'Reading' is not something one 'does to' a book (though it is perhaps something one 'does with' it). The restriction represented in (69. b) (and a parallel one with *happen to*) seems to me to be a reflexion of a notional distinction between verbs like kill or damage and verbs like read, such that some sort of 'change of state' in the object is a necessary consequence of the action



denoted by the former - whereas there is no such necessary implication in the case of read. 'Change of state' is to be interpreted rather widely: it can refer to a change in the 'physical or mental condition' of the nominative N - as with damage, dismantle, repair, kill, revive, terrify; or in its 'physical or abstract location' - as with move, turn, lift. With read, although in the case of a book as opposed to an inscription on a tombstone it is necessary to 'change the state' of the book in various ways (in particular by turning pages) in order to read it, the action of reading in itself has no such consequences.

Many 'do to' verbs have intransitive equivalents - i.e. verbs which refer to the same 'process' without mentioning an agent. These verbs in English may have the same phonological shape as the 'transitive' - as in (70. 1) (and cf. Poutsma, 1926: ch. 46, par. 37-41) - or be different - as in (70. 2):

- (70) 1. a. The landscape has changed  
      b. They have changed the landscape  
      2. a. Bill died  
          b. John killed Bill

For further examples like change, see Jespersen, 1928: pars. 16.4. Sundén (1916: 108-86) classifies a large number of verbs with both an 'intransitive' and a 'transitive' (mostly 'do to') use.

In many languages, the 'transitive' form is marked by a distinctive suffix, as in the Turkish equivalents of (70. 2) quoted by Lyons (1968a: 353):

- (71) a. Bill öldü  
b. John Bill-i öldürdü

The formation of 'transitive verbs' in this way (by suffixing -dür- (and its phonological equivalents) to an 'intransitive') is apparently a productive process in Turkish. In other languages the relationship is not productive: the phonological difference between cwelan ('die') and cwellan ('kill') in Old English is attributable to the absence vs. the presence of such a suffix, but 'transitive verbs' were no longer freely formed in this way. As further examples of 'transitive' suffixes, consider Coos -t and -ts or Takelma -(a)na-, illustrated respectively by (72. 1) (taken from Frachtenberg, 1922: 328) and (72. 2) (taken from Sapir, 1922: 136):

- (72) 1. a. x·pī ('It burned down')  
b. nx·pīt ('I burned it')  
2. a. hāx ('It burns')  
b. <sup>h</sup>hāxna ('He burned it')

(See too, for further examples, Tesnière, 1959: ch. 113.) It is possible for an affix with such a historical origin to spread to other 'uses' or become confused in phonological realization with affixes with distinct functions, or (as we have noted) cease to be productive. Which is only to say that the superficial morphology is (once more) not always a reliable indication of such underlying relationships. All of this is illustrated by the distribution (whatever its history) of the same Old English suffix (but see Jespersen, 1928: par. 16.51).<sup>1</sup> Consider too Sapir's

1. Cf. too Old English ge- and be-: Visser, 1963: pars. 134, 144.

(1922: par. 45) discussion of the -(a)n suffix illustrated above (including the intriguing relationship between wait<sup>e</sup> ('I shall sleep') and gel-wa-ina'n ('I shall sleep with her')). I shall, however, not explore these surface complications here.

Such 'transitive verbs' are usually termed 'causatives', and such an affix (where it occurs) is usually referred to as a 'causative' or 'transitive' affix. I propose to adopt the term causative with reference to 'transitive' verbs of the 'do to' kind - i.e. not only for those which bear an appropriate affix (as in the b examples in (71) and (72)) or are phonologically the same as the corresponding 'intransitives' (as move in English). Moreover, I want to include not only those verbs which have an (notionally) obvious 'intransitive' equivalent (like kill) but also verbs like dismantle or repair to which there does not appear to correspond any particular 'intransitive verb'. This requires (as a preliminary formulation) a rule dependent on (at least) +ergative of, say, the form in (73):

→/ (73) +ergative  $\rightarrow$  +causative

These verbs, then, are +causative; read and the like -causative. In many instances, as we have observed, there is no phonological distinction between the causative and the corresponding 'intransitive' (if there is one); in other cases, the presence of +causative is associated with a distinct 'lexical item' (as kill/die). Presumably in a language like Turkish there is a 'segmentalization rule' (cf. Postal, 1966a; Jacobs & Rosenbaum, 1968: ch. 11) which 'segments out' the +causative feature as a suffix to the verb. There are causative equivalents for 'intransitive' clauses with ergative subjects as well as those with simple nominatives - as in (74) (and cf. some of the examples in Poutsma,

1926: ch. 46, par. 37):

- (74) 1. a. They marched to the station  
b. Egbert marched them to the station  
2. a. They work hard  
b. Egbert works them hard

(though the existence of examples lacking phonological identity is doubtful). Compare the distinction between o-causativization and ni-causativization in Japanese (Kuroda, 1965).

There does occur in English what might appear to be a causative suffix with causative verbs which correspond to 'intransitive adjectives' - as slacken/slack. But we find this same -en form as the simple 'intransitive verb' corresponding to slack (its 'inchoative' equivalent), as illustrated in (75):

- (75) a. The rope was slack  
b. The rope slackened  
c. Egbert slackened the rope

This suggests that -en is a 'verbalizing' suffix rather than specifically causative. There is a general correspondence in shape between such inchoatives and causatives - as increase, decrease, age, blacken, lie/lay (see Poutsma, 1926: ch. 46, pars. 20, 42; Jespersen, 1928: pars. 16.5, 16.7). Note the inchoative and causative uses of grow, etc. (It grew, He grew it, It grew tall) and get (It got taller, He got it ready). Such an inchoative/causative correspondence is not surprising; in general, it would appear that 'inchoatives' are merely the non-'verb'-root 'intransitive' equivalents of causatives - they express the 'change of state' that the causatives effect. A perhaps more promising candidate as a quasi-productive causative suffix in



English is -ize, added particularly to 'adjectives' and nouns; legalize, characterize. However, in this instance also we find inchoatives like materialize.

Clearly there are other superficial 'transitive'/'intransitive' pairings than that we can associate directly with causativity. There are a large number of surface 'intransitives' that result merely from the deletion of the object (which may be of various types):<sup>1</sup>

- (76)
- a. Egbert is painting
  - b. He drinks
  - c. He undressed
  - d. They kissed
  - e. They always change for dinner

However, there is a further kind of 'transitive'/'intransitive' example which is rather more problematic; and this results from what Jespersen (1928: par. 16.8) calls the 'activo-passive use

1. See further e.g. Poutsma, 1926: ch. 46, pars. 7-10, 26-9; Jespersen, 1928: pars. 16.0-16.3; Visser, 1963: pars. 155, 159-62; Lyons, 1968a: pars. 8.2.9-8.2.11. In (for instance) Hungarian, intransitive clauses show the same set of subject pronoun affixes on the verb as transitives with deleted indefinite object: the so-called 'indefinite' (Csink, 1853: 265-7) or 'subjective' (Sauvageot, 1951: 68-75) conjugation. However, verbs with a definite object (deleted or not) take the 'definite' or 'objective' conjugation. This provides a further possible source for such morphological variations unconnected with underlying cases (cf. pars. <sup>2.3</sup>~~40-64~~).

of some verbs', as exemplified in (77):<sup>1</sup>

(77) The book sold quickly

A sentence like It washes well is ambiguous between an interpretation associated with an ergative subject and a deleted object and an interpretation like that for (77), with respect to which an underlying nominative appears as subject. That is, (77) looks superficially as if it should have a corresponding causative (like John sold the book quickly). But these two clauses are clearly not related as are (70. 1. a) and (70. 1. b) (nor are the two interpretations of It washes well), and a clue to this is provided by the obligatory presence of an adverbial with the V in

1. Cf. too Sundén, 1916: particularly 187-216; Poutsma, 1926: ch. 46, pars. 32-3; Hatcher, 1943; Kirchner, 1959; Visser, 1963: pars. 163, 168; Lyons, 1968a: par. 8.2.13; Anderson, 1968a: 12-13. This phenomenon appears to fall within the scope of Tesnière's (1959: chs. 115-16) 'diathèse récessive', which refers to clauses in which the number of 'actants' (cases) normally associated with a particular verb-type is reduced, and within which he includes passives with deleted agent, 'impersonal passives' (Itum est) and 'reflexives' like Cet objet se vend bien. Thus, with respect to 'passives', we must allow for the fact that, in certain languages (e.g. Turkish - Lyons, 1968a: par. 8.3.4), this form of the verb appears to be a reflexion of the denial of subject position to and deletion of an indefinite agent (whether in a transitive or intransitive clause). I shall explore below the principle underlying this surface intersection of 'passive' and 'reflexive'.

(77)), which expresses 'either a qualification of it or a generalization about its feasibility' (Halliday, 1967: 47- see too Erades, 1950: 156). This 'modal' quality, the associated 'habitual' aspect, and the fact that in such instances an agent appears to be presupposed (though the 'modality' is associated with the 'process' denoted by the verb - it is 'process-oriented' rather than 'agent-oriented' (Halliday, 1967: 47-8)) make it tempting to try to relate clauses like (77) to 'modal transitive' clauses like It was possible to sell the book quickly (Anderson, 1968a: 29, fn. 42). Compare too the examples in (78):

- (78)    a. It polishes easily  
         b. It can be polished easily

But consider an example like The book sold well. With it there are no such corresponding 'modal transitives', and this is because more obviously in this case (and, I would suggest, with (78. a)) the adverbial is 'associated' with the subject, whereas in (78. b) and the like it relates rather to an agent. Kandiah (1968) suggests that such a distinction is characteristic in general of the relation between causatives and their corresponding intransitive (and this would be explicable with reference to the view of causatives proposed below). Consider too the examples cited by Hirtle (1967: 53): This shirt irons well, His plays act well, Food spoils quickly in summer, It washes like cotton. And notice the notional similarity of clauses with two surface nominals like Oysters make a good meal. The derivation of such clauses remains (for me) something of a mystery, as does a characterization of the range of verbs that permit such a 'use' (see too Jespersen, 1928: par. 16.8). However, for a discussion of further examples of the various kinds of verbs that can be either

'transitive' or 'intransitive', see Sundén (1916: 218-362), Maejima (1958) and the works referred to there.

We should also note finally in this section that certain (minimally specified) causatives take a 'sentential' nominative, as in (79):

- (79) a. Egbert made them leave  
b. Egbert allowed them to leave  
c. Egbert prevented them from leaving

or with more complex verbs involving lexicalization of typically 'speech as an instrument':

- (80) 1. a. He persuaded them to leave  
b. He dissuaded them from leaving  
2. a. He ordered them to leave  
b. He permitted them to leave  
c. He forbade them to leave

There seems to be a tendency (to put it no more strongly) for make (as opposed to allow and prevent) to require an ergative subject in the subordinate clause:

- (81) 1. a. \*He made John die  
b. \*He made John's death  
2. a. He allowed John to die  
b. He prevented John's death

Some non-ergative subjects appear under make: He made John fall/cry. But cause appears normally to fill this 'slot':

- (82) He caused John's death

Have similarly pre-supposes some agency other than that of the subject of the superordinate clause, but in its case the sub-



ordinate ergative need not be subject:

- (83) 1. a. He had them leave  
      b. He made them leave  
      2. a. He had them killed  
          b. \*He made them killed

(and even in (83. 1. a) the involvement of the superordinate ergative seems more 'indirect' than in the corresponding sentence with make). Partly because of this, a clause like He had a book stolen is ambiguous. On the derivation associated with the alternative interpretation, see ch. 5; and for a discussion of the differences between such constructions with have, compare Lee, 1967. Notice too 'quasi-causatives' like require, which can take a that-clause as nominative rather than the 'reduced' forms demanded by make, etc. (Cf. the discussion of the distinction between demand and command by Boyd & Thorne, 1969.) We shall have occasion to return to the relationship between these various types of causatives with sentential nominative and 'simple' causatives below, particularly in ch. 6.

As an aside, I would like to note that the forms in (79) and (80) raise two further considerations that will recur in our discussion. Firstly, there is the question (which I shall merely raise at this point) of accounting for the relation between polar terms and the negation of their respective antonyms, such that the 'comparative' and 'scalar' properties of big/not big/not small/small and the like require expression. The problem becomes acute with 'overt comparatives':<sup>1</sup> John is bigger than

1. Cf. Small, 1924; Jespersen, 1949: 388; Vendler, 1967:

180-1; McIntosh, 1968; Seuren, 1969: 128-30.

Bill does not imply that 'John' is 'big' or 'Bill' is 'big' (or even 'small'), but merely indicates their relative positions on the small/big scale. With the present examples, the situation is slightly more complex, as is illustrated by the 'equivalences' tabulated in (84):

- (84)
1. a. Egbert made them leave  
b. Egbert didn't allow them not to leave  
c. Egbert prevented them from not leaving
  2. a. Egbert didn't make them leave  
b. Egbert allowed them not to leave  
c. Egbert didn't prevent them from not leaving
  3. a. Egbert made them not leave  
b. Egbert didn't allow them to leave  
c. Egbert prevented them from leaving
  4. a. Egbert didn't make them not leave  
b. Egbert allowed them to leave  
c. Egbert didn't prevent them from leaving

A further such set is obtained when we substitute remain for not leave and not remain for leave.<sup>1</sup> The formulation of a non-ad hoc account of all this is not immediately obvious (to me, at least), but there are some reasons for regarding make as the 'unmarked' form, and some sort of notion of 'inherent negation' will perhaps take us part of the way towards a solution. One reason for thinking this is connected with my second observation, namely the association we find here (as elsewhere) between the

1. I have noted elsewhere (Anderson, 1971: part 2) a similar situation with respect to 'modal verbs' in English - and also (parenthetically) with 'quantifiers' (as too Jespersen, 1924: 324-5; Householder, 1971: ch. 6; Leech, 1969: par. 3.5). See further ch. 8.

'negative' form and the occurrence of from rather than to (or in). Compare absent from/present in, and the further examples we shall encounter in the following chapters. I shall, in this instance, also, consider some of the implications of this for our present investigation in ch. 6.

### 3.2. 'Intransitive' and 'adjectival' causatives

So far we have been discussing causatives in relation to 'transitive' clauses only. We must consider now whether they are limited to these, or whether the  $\pm$ causative distinction is also appropriate to reflexive clauses. Must the specification on the left of the rule in (73) be further qualified (in particular, as -reflexive), or can it be left to apply in the more general way indicated there? Notice to begin with that (notionally) it would seem not unreasonable to regard Egbert moved as causative, given that Egbert moved the stone (and Egbert moved himself) has been so interpreted. So too with most other reflexive verbs, which appear to involve the subject effecting a 'change in his state' (in the rather broad sense in which this was interpreted above) - consider e.g. leave, swim, etc. The question is to determine whether there are any non-causative reflexives. The number of non-reflexive non-causatives is apparently rather small - I am not even sure that read is a very good example. So too with the reflexives. Perhaps work is an example. 'Changes of state' for the subject are usually associated with most kinds of working, but it is not clear that these are intrinsic to 'work' itself. Notice that, as we observed above, the semantic difference between They worked and Egbert worked them (hard) is much greater

than that between They moved and John moved them. Let us, for the moment at any rate, leave open the possibility of such a distinction with respect to 'verbal' reflexive clauses, and thus leave rule (73) unmodified in this respect.

An even more difficult decision (for my part) is posed by 'non-verbal' clauses. As rule (73) stands, it allows for

<div style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 5px; display: inline-block;"> +reflexive +stative </div>	clauses to show a $\pm$ causative distinction. <u>He is</u>
--	---

cautious and the like seem fairly straightforwardly non-causative. But consider examples like those in (85) where we have get rather than be:

- (85) 1. a. He got tough  
           b. He got aggressive  
       2. a. Get tough!  
           b. Get aggressive!

The examples in (85. 2) can be read as injunctions to the subject to bring about a 'change of (mental) state' in himself. In this case, the causative feature is reflected in the shape of the copula (and its associated surface syntax): cf. He was tough. Once again, as remarked on above, there is a correspondence between causative and inchoative:<sup>1</sup>

(86) He got old(er)

1. Thus, there are two rather different ways on the surface of marking inchoatives - as in (86), or by 'verbalization' (cf. He aged). This may be merely the result of alternative segmentations. I.e. it may be possible to have a general convention allowing a subclass of +stative ...



(In 'long passives', the overriding effect of the presence of erg is such that any distinction between get (inchoative) and be is considerably attenuated - cf. He got/was killed.) The relevance of the  $\pm$ causative distinction to oblique stative clauses (He was careful with the book, etc.) is even more doubtful, and I shall not allow for such in the sets of rules that are discussed in what follows:  $\pm$ oblique will be dependent on -causative. If one also wanted to exclude the  $\pm$ causative possibility from reflexive stative clauses, then the rules could be ordered appropriately - e.g. by making  $\pm$ reflexive dependent on  $\left[ \begin{array}{c} +\text{oblique} \\ -\text{stative} \end{array} \right]$  as well as +ergative.<sup>1</sup> However, for the present discussion I propose that we add rule (73) as it stands to II. i. 2 in (67), and modify the left-hand side of II. i. 3 to include -causative.

Thus, II. i would now read as in (87):

- (87)
1.  $V \rightarrow \left[ \begin{array}{c} \pm\text{ergative} \\ \pm\text{stative} \end{array} \right]$
  2.  $+\text{ergative} \rightarrow \left[ \begin{array}{c} \pm\text{reflexive} \\ \pm\text{causative} \end{array} \right]$

... verbs to be inserted with respect to a -stative, -ergative V, with associated segmentalization of the -stative feature as a distinctive copula (become) or as a suffix. However, cf. Lakoff, 1965: pars. 4.15, 9.2; and see further chs. 6 and 7.

1. I leave the reader to construct this set of rules for himself, if he so wishes. This would also entail changes in II. ii.

$$3. \left[ \begin{array}{l} -\text{reflexive} \\ -\text{causative} \\ +\text{stative} \end{array} \right] \rightarrow \text{+oblique}$$

There is no DR (in II. ii) for +causative; it is intrinsic to V and has no effect on the array of case elements or the subsequent subcategorization of their dependent Ns. (This means that kill and die now differ by an intrinsic feature; however, the effect of the proposals made in Part III is once more to remove this intrinsic difference.) This allows for the various (more and less certain) causative possibilities we have discussed.

### 3.3. Clauses of result

There is a further distinction that would appear to be relevant here. In the various 'active transitive' clauses we have been discussing, all the objects have belonged to the traditional category of 'affiziertes Objekt' ('Richtungsobjekt', 'objet affecté') - though as Jespersen (1928: par. 12.12) points out, 'neither the names given to these objects ... nor the definitions usually given are comprehensive enough'. This is associated with Fillmore's characterization of the 'objective' case ('the semantically most neutral' - 1968a: 25) quoted above. However, there is one of the traditional sub-types of object which is semantically and syntactically sufficiently distinct to have been differentiated by definition and name from other kinds of object. This is the 'object of result' ('effiziertes Objekt', 'Ergebnisobjekt', 'objet effectué'). Notionally, such an object is the result of the action of the verb, as in the examples in (88):

- (88) 1. a. Egbert built the house  
b. Egbert wrote a book  
2. Egbert painted a picture

Verbs like paint (cf. Jespersen, 1928: par. 12.22) also take an 'ordinary' object, as in Egbert painted the ceiling (though this may be indeed an underlying locative). Consider the possible ambiguity (noted by Fillmore, 1968a: 4) of John paints nudes; cf. too grind corn/grind flour. The fact that the 'object of result' does not ante-date the action of the verb underlies the restriction illustrated in (89):

- (89) What did Egbert do to the shack? { a. \*He built it  
b. He demolished it

Like non-causative clauses, clauses with an 'object of result' (or 'subject of result' in 'passives') are not appropriate as answers to 'do to' questions. But they are notionally unlike non-causatives, in which I have suggested the action of the verb does not necessarily impinge at all on the state of the object. Clearly, 'result' clauses are more like causatives in that the action of the verb is intimately bound up with the object; it is not merely a play on words to say that both types of clause express the effect of an action, effective in the one case and affective in the other. The object is 'brought into existence' (in some sense) - build, create, produce - or 'put out of existence' - demolish, destroy - or has its 'physical or mental state or location' modified in some other way - change, move. The sequence build/dismantle/rebuild reflects a series of 'causative' actions - effective, affective (or 'diseffective'),



(re)effective.<sup>1</sup> Notice that make, as well as being a causative which takes a sentential nominative (cf. (79. a)), also takes an 'object of result' - as in He made the toy. If both such uses are interpreted as 'causative' (as I am proposing), then the distribution of make is revealed as systematic, rather than merely haphazard. Thus, I would like to regard clauses with an 'object of result' as a sub-type of causative, as expressed (for the moment) in a rule like that in (90):

→/ (90) II. i. 3. b. +causative →<sub>+</sub>resultative

It may be that +resultative should introduce (in II. ii) a feature on nom. Also, if there are no reflexive resultative clauses (I am unable to construct any), then -reflexive should be added to the left-hand side of II. i. 3. b in (90).

### 3.4. Causativization of 'nominal' clauses

I shall in the next few chapters neglect the distinction incorporated in (90) among what I shall henceforth term simply **causatives** - referring to both build etc. and demolish etc. But before leaving this area, one particular question remains to be considered. I have suggested that resultative clauses are a sub-type of causative, and that in particular no case category additional to those we have considered is involved in such clauses. However, there are clauses in which we appear to find an 'ordinary object' together with an 'object of result', as in (91):

1. I leave aside the interesting questions of reference (see e.g. the works referred to and discussed in Sampson, 1969) raised by such a sequence.



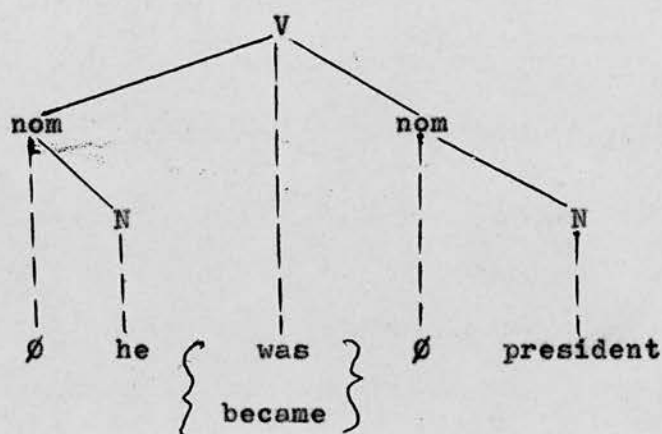
- (91) a. We elected him president  
b. They appointed him treasurer

(Cf. the examples in Jespersen, 1940: par. 3.2) The 'archi-causative' make (and create) is also one of these verbs: They made Egbert an observer. From such examples, it might be argued that the effect of selecting +resultative is to introduce a distinct case category, say 'result', which is manifested as president in (91. a) and treasurer in (91. b), and presumably as the house in (88. 1. a). (The universal presence of nom in clauses would then be difficult to maintain.) However, it seems preferable to interpret (91. a) and (91. b) as the causative equivalents of respectively (92. a) and (92. b).

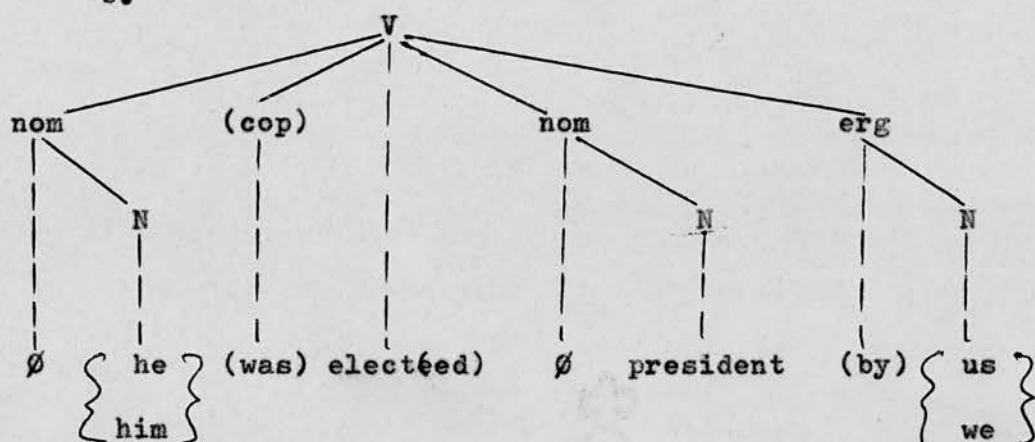
- (92) a. He was/became (the) president  
b. He was/became (the) treasurer

That is, the clauses in (91) represent the causativization of 'nominal' clauses. Compare the parallelism in number etc. restrictions instanced by \*He was the presidents/\*We made him presidents, \*He was the waitress/\*We made him the waitress. Note too \*President was elected him (by us): unlike a 'result' NP, such nominals do not show 'passivization'. If the relevant structure of (92. a) can be represented as in (93. a), then that for (91. a) and the 'passive' (He was elected president by us) is perhaps as in (93. b):

(93) a.



b.



The interpretation of clauses like those in (92) presents a number of problems which I do not wish to broach at this point. The fact that in (93. a) was directly represents V will be allowed for by a modification to the rules for cop proposed below. The interpretation of (at least some) predicate nominals as a second nominative phrase I would not urge strongly here, particularly as it leaves all sorts of problems unsolved, but it seems not too implausible in view of the nature of their surface inflexional marking in many languages and the various restrictions associated with the co-referentiality of the two Ns involved.<sup>1</sup> However, we shall return to such questions in

1. Cf. e.g. Lehiste's (1969) discussion of the distribution of the 'nominative' and 'essive' in Estonian.

ch. 8.

Also in Part III we shall be reviewing the interpretation of causative clauses presented here in the light of the full range of phenomena surveyed in this and the following part. Already, it seems likely that an interpretation of causatives involving some kind of superordination (such that the structures underlying causatives with sentential nominatives and 'simple' causatives are rather more alike) is to be preferred. Jespersen (1940: ch. 3), for instance, suggests that examples like (91) represent a sub-type of 'simple nexus as object of result'.<sup>1</sup> The fact that a combination of two nominatives is permitted only either in clauses lacking an ergative or in ones which are causative suggests this: if causatives involve superordination, then it would be possible to generalize in terms of restricting two-nominative combinations to non-ergative clauses, since the ergative in causative sentences would then appear in the clause superordinate to that containing the two noms. We shall find similar restrictions in the distribution of locatives, which thus provide further support for such an interpretation of causatives. Notice too that we find clauses very like (91) (semantically and in surface syntax) which must involve two clauses: consider 'resultative' clauses of the type of Anderson drives me mad listed by Jespersen (1940: ch. 3) (and cf. Visser, 1963: pars. 644 ff.). We find once again in such clauses the omnipresent make (He makes me sick), though without the restriction to ergative subordinate subjects (cf. (81. 1)). A unitary treat-

1. Cf. too e.g. Sechehaye, 1926: 160-1; Anderson, 1970a.

ment of causatives would favour a two-clause derivation for (91) and the like - and even, as we shall see, for other 'simple' causatives (resultative and non-resultative), as has been argued in rather different terms by Lakoff, 1965: pars. 4.16, 9.1-2. However, in the following chapter, rather than develop directly such an argument, I want to bring in some further phenomena relevant to our main theme, and try to account for such within the framework developed in this and the preceding part.

#### 4. Locative and ablative

##### 4.1. Locatives

In this chapter I propose (among other things) to begin to take up again the question of the analysis of <sup>some of</sup> those 'non-adjectival' verbs which tended preferentially not to co-occur (superficially at least) with 'progressive aspect', i.e. 'stative' verbs like know, possess and contain. In order to do this, it is necessary first of all to consider the introduction into our grammar of the notion of locative, as a further case element whose syntax I propose now to examine.

I suggest that in clauses like those in (94):

- (94)    a. The statue stands on a plinth  
         b. He remained in London  
         c. We keep the money in a box

there is (whatever else there may be) a locative phrase, which contains a noun indicating the spatial location of the nominative (and the associated 'process'/'state'), and is characterized in these particular examples by the occurrence of the superficial case markers in and on. Clearly since in and on (and at, etc.)

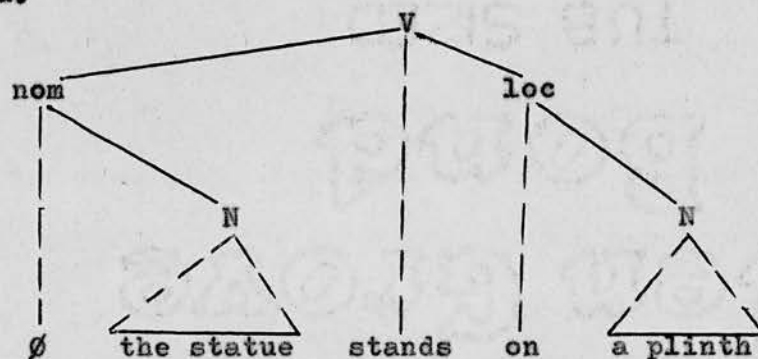


are not semantically equivalent (though in and on, for example, may overlap in 'extension' - Bennett, 1968: 164), the locative category would appear to be subject to more extensive sub-categorization than seemed to be obviously appropriate to the cases we have studied so far, and this is recognized in traditional terms like 'inessive' and 'adessive' (as subtypes of locative) - and by Hjelmslev (1935) with respect to the dimension 'coherence'/'incoherence'. This is not to deny that many (possibly all) such 'prepositional' distinctions can be considered (even without the ingenuity of a Horne Tooke) to involve (underlying) nominals - beside, in front of, etc. This is particularly transparent in the 'postpositions' of Basque - as etchearen aldean ('beside the house'; etche - 'house', alde - 'side'; etchearen is (definite) genitive, aldean (definite) locative).<sup>1</sup> I do not intend here to investigate in any detail such phenomena, an account of which for English would have to reckon with surveys like those of Blake (1930), Lindkvist (1950) and Hill (1968) - though Lindkvist's account, for instance, suffers from over-differentiation with respect to polysemy (as pointed out by Bennett (1968: 156)), in that it incorporates distinctions into the description of prepositions that are marked rather in the accompanying noun phrase. I shall take into consideration only such aspects as are necessary for the account I am going to propose below of the

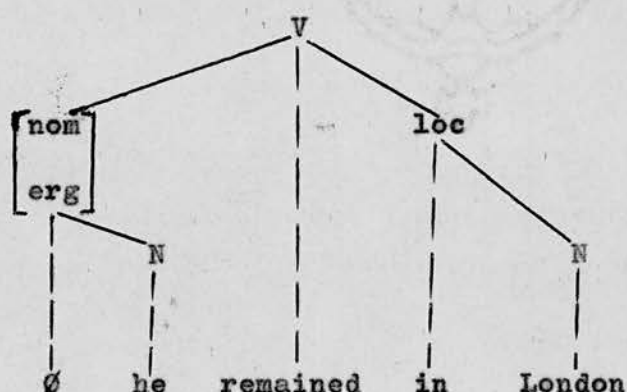
1. See further Lafitte, 1962: 168-72; cf. too similar phenomena in e.g. Hindi, Turkish, Twi. On such (historically) in Indo-European, see the works referred to in Brugmann, 1911: pars. 594 ff. (and cf. pars. 551 ff.). See also, more generally, de la Grasserie, 1890: 98 ff.

relation between the locative and other case categories. Thus, overlooking these differences of subcategorization with respect to the locative category, we can represent the structures underlying the examples in (94) as in (95):

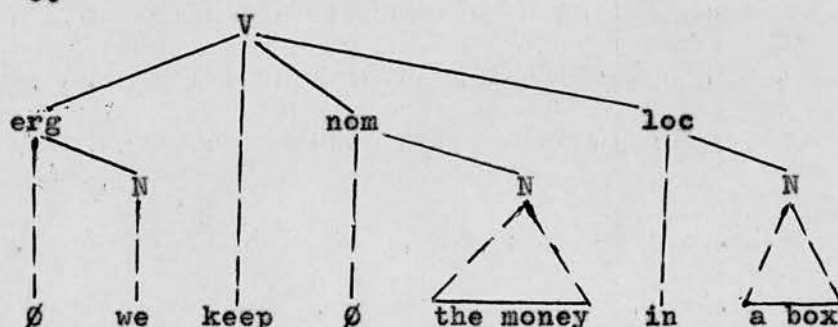
(95) a.



b.



c.



(The structure of (94. c) as represented in (95) presupposes

the prior operation of rule II. iii. 1 in (67). The verb is also causative, as, of course, is that in (b), a point to which I shall have to return below.) In the examples in (94), the verbs chosen all 'strongly select' loc; i.e. allowing for deletion, loc is necessarily part of the frame into which such verbs are inserted (and we might thus call them 'locative verbs'). It is clear that there are many verbs with respect to which this is not the case - verbs, that is, which co-occur with loc, but not necessarily. I shall not propose here an account of the occurrence of loc with these latter verbs. It is likely that in such instances loc is derived rather differently (cf. Fillmore, 1968: note 64), probably via some type of superordination, and our discussion in ch. 7 will depend on some such assumption. I shall be concerned at this point with 'locative verbs'.

We could allow for such clauses as those in (94) by the simple addition of a subcategorization rule in II. i, and a matching dependency rule in II. ii, of the form represented in (96):

- (96) a.  $X \rightarrow +\text{locative}$   
 b.  $+\text{locative} \rightarrow \text{loc} // V -$

where X stands for the as yet undetermined left-hand side of the first rule. Presumably (96<sup>b</sup>. b), intended to introduce loc in its neutral position, is ordered early in II. ii (i.e. in II. ii. 2), in order that the rule introducing erg can be ordered after it, so that erg will be placed before loc, where both are present - The money is kept by us in a box - if indeed

the reverse order is more 'marked'. On the other hand, if such markedness cannot be motivated, this might be suitably represented in terms of simultaneousness of the dependency rules for loc and erg. These additions to the rules will allow for the structures represented in (95). We can also note here that it is possible for one verbal form to appear in all three different locative structures we have allowed for so far, as in (97):

- (97) a. It stood on a plinth  
b. He stood on the chair  
c. He stood it on the top of the piano

Compare here clauses with lie/lay (and see Jespersen, 1928: 340-6).

#### 4.2. Stative locative clauses

However, the clauses we have looked at so far (though they show that loc co-occurs freely with nom and erg) are apparently all non-stative, in that (e.g.) cop is absent; we must now determine whether the new subcategorization rule in (96) is dependent on (the selection of) -stative, or whether it will be possible to regard the selection of loc as independent of ±stative - i.e., we must determine further the composition of X in (96. a). There are indeed apparently clear instances of stative clauses which contain a locative, as in (98):

- (98) The post was fixed in the ground

This example is either 'adjectival' or 'non-adjectival', depending on whether the underlying structure lacks an ergative category or not (as emerged from the discussion in par. 2.2); and it differs from the examples in (94) in that the nom category is



marked as stat (and the copula is thus subsequently introduced). This suggests that rule a in (96) might be incorporated as a sub-part of II. i. 1, as simultaneous with  $\pm$ ergative and  $\pm$ stative (though the verbs appearing in clauses that are both  $\pm$ stative and  $\pm$ locative seem to be restricted to non-adjectival roots - as in (98) - unless close by and the like are taken as simple examples of adjective plus loc). However, the occurrence of locative verbs seems to be limited to clauses which either lack an ergative or are causative (as I observed above with particular reference to the examples in (94)): loc and erg are mutually exclusive in non-causative clauses. Accordingly, rather than appearing in II. i. 1, the subcategorization rule allowing for locatives should apparently be ordered at II. i. 3, with a left-

hand side specification  $\left\{ \begin{array}{l} -\text{ergative} \\ +\text{causative} \end{array} \right\} .^1$

#### 4.3. Clauses with copula + locative

We should now note that there are also certain locative clauses which (superficially, at least) contain a copula and no verb element. So (99):

1. Such a specification suggests that an account of causative locative clauses in terms of superordination (cf. par. 3.4, and see further Part III) may eventually prove preferable. In this case, the locative and ergative would not appear in the same (underlying) clause, but the locative in a subordinate and the ergative in the superordinate - thus accounting for the restriction

embodied in the specification  $\left\{ \begin{array}{l} -\text{ergative} \\ +\text{causative} \end{array} \right\} .$

(99) His house is in the country

The question arises: how are we to interpret such clauses with respect to their underlying structure?

We could allow for them by modifying our set of rules in such a way as to generate locative clauses without verbs (adjectival or not), with the copula presumably introduced once more superficially (to 'carry' the tense marker, etc.). And this is perhaps how we could interpret in part recent suggestions by Lyons (1966: 229; 1968a: par. 8.4 - cf. too Bach, 1967). That is, the base rules for the clauses would have to allow for clauses with a verb and without a locative (John sneezed), clauses lacking a verb but containing a locative (His house (is) in the country) and clauses with both a verb and a locative phrase (The statue stands on a plinth) - unless this last possibility is interpreted as involving some sort of co-ordination or subordination, with stand, etc. perhaps representing lexicalizations of a copula with respect to underlying 'manner' phrases indicating 'posture'. However that may be, at least two types of clause would be envisaged, one type characterized by the presence of a verb, the other by the absence of such. And the copula is introduced either in the absence of a verb (but the presence of a locative) or after an occurrence of stat (when a verb is present).

However, we also have to account for clauses like that in (100):

(100) His house is situated in the country

which I presume we would want to show as closely related to (99). Now, (100) could perhaps be derived in the same way as I have

just sketched out for (99), with the addition of a rule introducing a verb that is present only superficially - since this verb is lexically empty. Consider too the examples in (101):

- (101) a. Father was in his favourite chair  
b. Father was seated in his favourite chair

where the lexical content of seated can perhaps be regarded as derived from the locative phrase. But such an explanation is inappropriate in cases like (98) or (102):

- (102) a. Father was seated on the ground  
b. Father was sunk in his favourite chair

where the verb in a locative clause does have some independent lexical content. This situation suggests rather that we should try to extend the account proposed earlier for (98) (and thus (102)), in which a verb is present in the underlying structure, to the clauses in (100) and (101. b). Such an account, however, leaves us in its turn with the problem of bringing out the relationship between (99) and (100), and (101. a) and (101. b), respectively. The most obvious solution seems to reside in regarding the superficial absence of a verb in (99) and (101. a) as resulting from the deletion of an underlying pro-verb (rather than as a reflexion of the underlying lack of a verb), a verb which remains superficially in (100) and (101. b). It is the 'predictability' of the content of such verbs that permits the deletion. Notice that in cases like (102) there is no corresponding form with deleted verb, since the content of such a verb is not unambiguously recoverable in this way - cf. Father

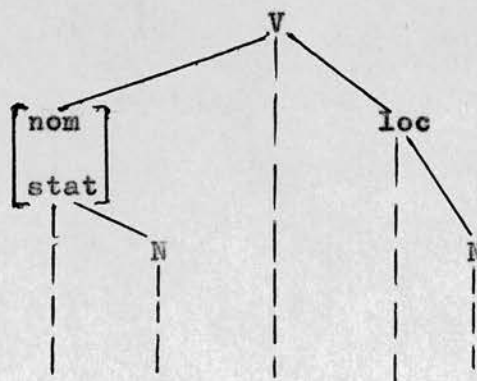
was stretched out on the ground. Father was on the ground is not more closely related to (102. a) than to this latter clause; it involves the deletion of some pro-verb less delicately specified than the verbs underlying either of these. Seated is thus 'unmarked' only in certain restricted environments; and it is not the case that other stative verbs do not co-occur with such locatives, but merely that seated is in this instance the 'neutral' one, which matches the lexical content of the locative noun phrase. Situated - or located - (the maximally unspecified locative verbs), is rather more generally 'unmarked'. It should be noted, however, that there are clauses containing superficially copula + locative phrases which do not appear to have a corresponding clause with the verb represented; and the clause just quoted is such, as is the example in (103):

(103) Your uncle is in the garden

Thus, in many instances of the occurrence of the minimally specified stative locative verb (which with certain (inanimate) types of nominative and locative phrases is represented when not deleted as situated, located, etc. - though the restrictions on these are rather different), it is obligatorily deleted.

Accordingly, with respect to this latter account, in all of examples (98) to (103), I suggest that we have an underlying structure that can be represented schematically as in (104):

(104)





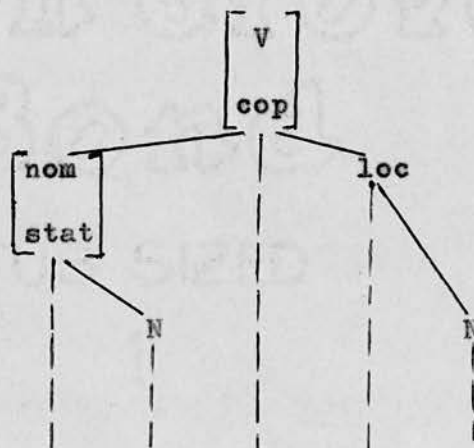
Such an account has the following pleasing consequences: (1) the diversity of (underlying) clause types is reduced, and thus the complexity of the relevant base rules; (2) the copula is in all these instances introduced before a V in the environment of a preceding stat, rather than in two different sorts of context. (Something like consequence (2) can be achieved (at least in part) in terms of a 'verbless locative' interpretation by regarding such clauses as a subtype of stative clause, cop thus being introduced in their case too with reference to a preceding stat, but only at the cost of a special rule permitting verbless locatives only in stative clauses, thus aggravating the degree to which consequence (1) is not met.) These simplifications are achieved at the expense of a rule deleting the verb where appropriate; but this is offset by the fact that it is no longer necessary to have a rule introducing a surface verb in certain circumstances.<sup>1</sup> If such an account is accepted (and it seems to be the preferable one, given the assumption that a V is present at all in the underlying structure of clauses), superficially verbless locative clauses can thus be accommodated in terms of the base rules already proposed.

However, with respect to the introduction of cop, another, and I think preferable, possibility - assuming the availability in the grammar of segmentalizing rules like those proposed by Postal (1966a) - is rather to introduce it initially as a feature

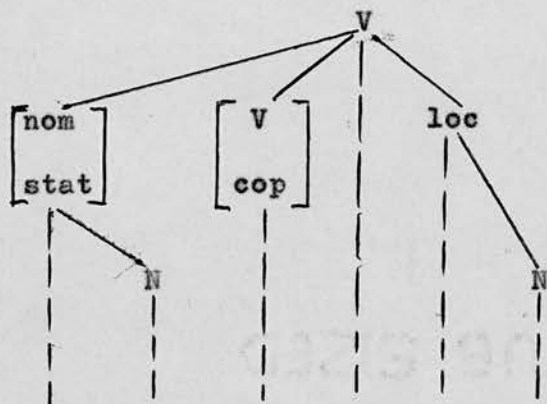
1. This latter sort of rule would also appear to involve us in difficulties with respect to derived constituent structure, at least in terms of an account of the type discussed by Lyons (1968a: par. 8.4).

added to V, a feature which is segmented out except in those cases in which, under the previous interpretation, the verb was deleted - in which instances, within the present interpretation, cop will merely be retained as a feature of V rather than being preposed as a separate segment. (And such would also be the case in 'nominal' clauses - cf. (94. a).) This would enable us to preserve the generalization concerning the presence of a verb in the clause, but without our having to consider that a large number of clauses have the verb deleted after a copula. Linked with this is the fact that we can now allow for the 'verbalness' of be; otherwise, we would have to consider it merely coincidental that the copula and verbs share a number of features of their syntax - e.g., in English, marking for tense and subject-concord. I shall thus adopt this last interpretation of clauses containing be + locative, and shall assume a modification of rule II. iii. 2 that adds cop as a feature to V (cf. (64)). Accordingly, the structure represented in (104) can be developed as either (105. a) or (105. b):

(105) a.



b.



the former underlying His house is in the country, etc., the latter His house is situated in the country. However, even this account will require to be modified in the light of the proposal concerning adjectives made in ch. 7.

#### 4.4. Subjectivization and objectivization of locatives

It would further seem to be the case that clauses containing a certain subset of locative verbs are the result of the operation of a permutation rule like II. iii. 1 with respect to nom and loc rather than nom and erg - and this involves at least some of the verbs like contain that we have noted as being problematic in some respects. Consider the a examples in (106):

- (106) 1. a. That box contains the apples  
           b. The apples are contained in that box  
           c. The apples are in that box  
       2. a. Our group includes many Eskimos  
           b. Many Eskimos are included in our group  
           c. Many Eskimos are in our group

(The selection of contain vs. include is apparently a function of the subcategorization of the relevant NPs. Also, after included, among appears to be the preposition appropriate with

plural (as opposed to collective) NPs.) The c clauses differ from the b in showing the lack of the operation of the locative verb segmenting rule proposed above. The a clauses differ from both b and c in sequence (loc preceding nom) and in lacking a copula. A verb like abound (as noted in Jespersen, 1928: 214) appears in clauses both showing and lacking such a subjectivization of the locative, as in (107):

- (107)     a. This area abounds  $\left\{ \begin{array}{l} \text{in} \\ \text{with} \end{array} \right\}$  wild life  
              b. Wild life abounds in this area

Compare too Wild life is abundant in this area, with  $\left[ \begin{array}{l} \text{nom} \\ \text{stat} \end{array} \right]$ .

(For further examples see Sundén, 1916: 91-2.) This situation could in part be explained in terms of an extension of rule II. iii. 1 to locative clauses, with nom in b and c in (105) marked as stat and nom in a not so marked. Thus, II. iii. 1 can be reformulated as in (108):

$$(108) \quad \text{nom} + V \left\{ \begin{array}{l} \text{erg} \\ \text{loc} \end{array} \right\} \rightarrow \left\{ \begin{array}{l} \text{erg} \\ \text{loc} \end{array} \right\} V + \text{nom}$$

CONDITION: stat  $\neq$  [nom]

Unlike those with subjectivized ergatives, such locative clauses naturally do not allow for imperatives (\*Contain the apples), etc. We can also now associate the lack of the 'progressive' possibility in clauses like those in a with the presence of a locative subject. But we shall return to this below.

In various respects, then, locative clauses can be accommodated by rather obvious extensions of the rules proposed so far.



But a problem has arisen. Consider again example (94. a) (or (107. b)). This shows the same sequence as the b and c examples in (106) (i.e., nominative phrase + verb + locative phrase), but like the a instances it lacks a copula. Thus, if we suggest that a clause like (94. a) contains  $\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$  because of the sequence, then we shall also have to make rule II. iii. 2 (introducing cop after stat) optional in locative clauses to account for both b and c in (106) (with copula) and (94. a) (without). This would constitute an undesirable complication. Moreover, a number of further problems are evident when we consider (94. b) and (94. c), corresponding to which there are no clauses with subjectivized locatives. Thus, under such an interpretation, the formulation of II. iii. 1 and II. iii. 2 would require additional complexities. It would seem preferable to propose a rather different explanation for the occurrence of both That box contains the apples and A statue stands on the plinth, whereby

the latter of these does not contain  $\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$  and it is unnecessary to modify II. iii. 2. I suggest that we add to the subcategorization rules in II. i. a rule of the form presented in (109):

$$(109) \text{ II. i. 2. b. } \begin{bmatrix} +\text{locative} \\ -\text{ergative} \\ -\text{stative} \end{bmatrix} \rightarrow \pm\text{subjective}$$

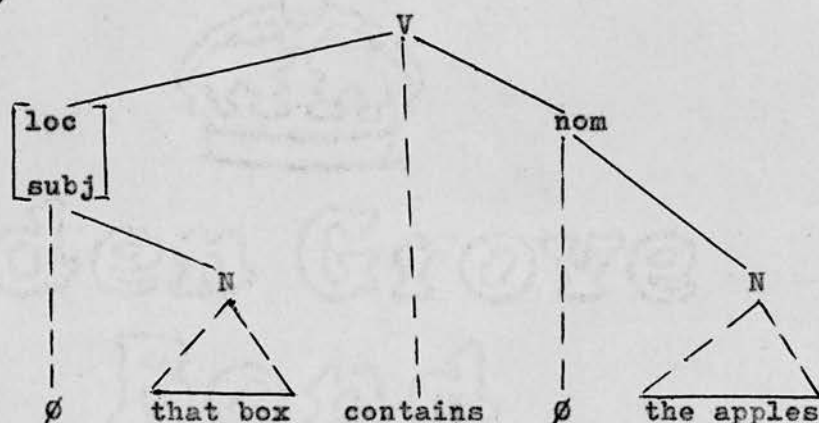
The effect of +subjective is (via a dependency rule) to add the feature subj to loc; and it is only when loc is so marked that it will undergo rule II. iii. 1 - which will have to be re-modified in accordance, as in (110):

$$(110) \text{ II. iii. 1. } \overset{n}{\cancel{\text{Nom}}} + V \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} \rightarrow \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} V + \text{nom}$$

CONDITION:  $\text{stat} \notin [\text{nom}]$

(The condition is vacuous in the case of subj, since it will automatically be fulfilled, in that  $\pm$ subjective is dependent upon (the selection of) -stative.) These rules account for the restriction of locative subjectivization to non-ergatives, and do not involve us in a modification of II. iii. 2 to allow the introduction of a copula after stat to be optional in locative clauses. Moreover, the subjectivized locative is shown as the marked possibility, which is reflected in the restricted set of verbs to which subjectivization is appropriate. Thus, the structure underlying (106. 1. a) (after the operation of II. iii. 1) can be represented as in (111):

(111)



That for (94. a) remains as in (95. a): in the absence of subj, II. iii. 1 has not operated.

However this does not exhaust the possibilities. Consider now a clause like that in (112):

(112) The ground was strewn with litter

in which the ground represents an underlying locative and with litter a nominative (with the with which characterizes (among other things) post-verbal nom). Compare the clause in (113):<sup>1</sup>

(113) Litter was strewn  $\left\{ \begin{array}{l} \text{on} \\ \text{over} \end{array} \right\}$  the ground

The difference between (112) and (113) consists in the presence versus the absence of subjectivization of the locative. However, in both cases, we find a copula. The occurrence of such is already in part allowed for by the rules we have considered so far, but if we are to account for the presence of cop in (113) in terms of rule II. iii. 2 then stat must be attached to the subjectivized loc which precedes the verb at the time at which II. iii. 2 operates. Thus, (112) and (113) would differ not only in the presence versus the absence of subjectivization but also in the location of stat.

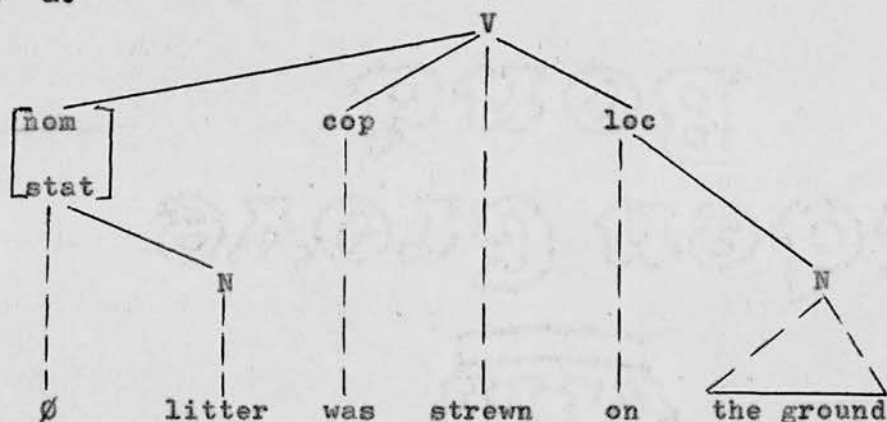
This possibility leads to a reconsideration of some of the examples we have already discussed, particularly (106. a) (That box contains the apples). It seems somewhat unsatisfactory to treat such clauses as non-stative, and to account for the absence of 'progressive aspect' in (106. a) in a different way from its absence with most 'adjectival' verbs - as was proposed above. In (106. a) the stat element could be attached to nom, in which case it will have been shifted to a position after the verb (by II. iii. 1) by the time of operation of IV. iii. 1 and cop will thus not be introduced. And we can associate the absence of 'progressive aspect' uniquely with the presence of

1. And see too Jespersen, 1928: 214; and, once more, Sundén, 1916: 91-2.

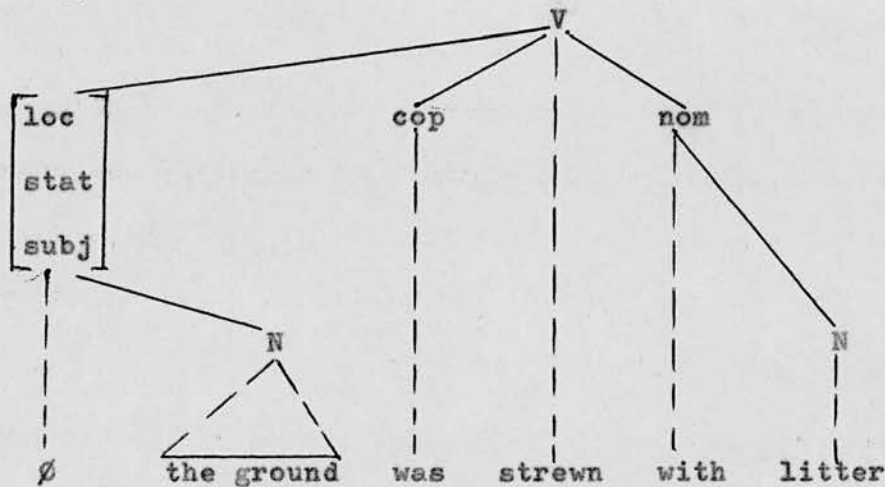
stat (before or after the verb). However, in this case the condition for the operation of II. iii. 1, that stat  $\notin$  [nom], will have to be restricted to apply only when erg is involved.

We can represent the various structures involved (after the operation of the latest version of II. iii. 2) as in (114):

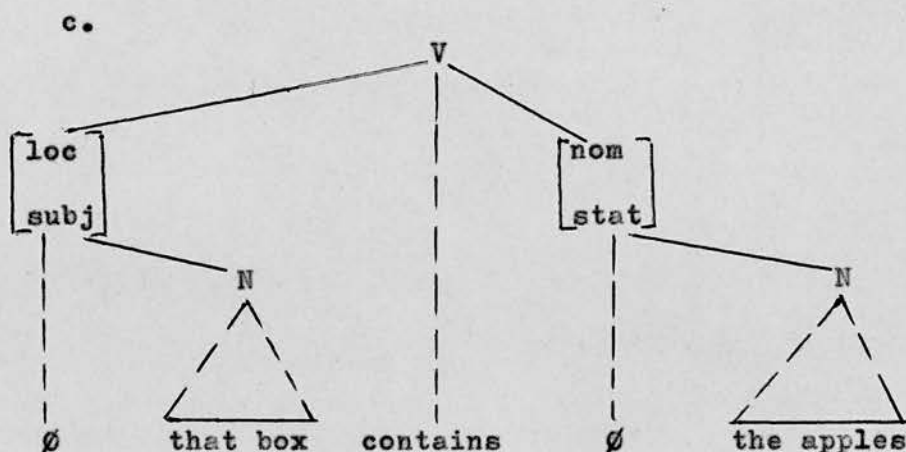
(114) a.



b.







Thus, subjectivization of the locative is always associated with the presence of stat, attached either to loc (as in (114. b)) or to nom (as in (114. c)).

We have thus associated 'stativeness' with the presence of stat (and absence of erg). But clearly clauses like (94. a) (A statue stands on the plinth) and (118. 1.a) are, in some sense, notionally 'stative' also, and it is only in the presence of an ergative that they too cease to be such. They are 'static' rather than 'dynamic'. Yet, if we associate stat with the absence of the 'progressive aspect', then our decision to interpret such clauses as lacking stat seems just in view of the comparative normality of the examples in (115):

- (115) a. A statue is standing on the plinth  
 b. A statue is occupying the plinth

(though we should note that the interpretation of the be + -ing clause in such instances is rather different from those appropriate to other occurrences). From this situation, it would appear that, just as clauses containing stat are not notionally

'stative' when an ergative is also present in the clause, so a clause which lacks stat (and also erg) but contains loc is nevertheless 'stative'. That is, clauses containing either loc or stat are notionally 'stative' in the absence of erg (but see the further discussion below). (This common feature no doubt underlies in part historical shifts from locative phrase to stative verb (adjective) exemplified in the development of asleep (or alive) in English. Compare too pairs like She is exhausted/ She is in a state of exhaustion. We return to the question of this relationship between 'adjectival' and locative clauses in ch. 7.) Thus, the locative clauses we discussed above which contained only a copular verb are a sub-type of those clauses which contain two markers of 'stativeness' (stat and loc - and no erg), with the verb minimally specified.

There is a relevant further possibility to be allowed for, as represented in a clause with an ergative like that in (116):

(116) John strewed the ground with litter

Compare John strewed litter on the ground, and consider too the paradigm in (117):

- (117) a. John planted the garden with apple-trees  
 b. John planted apple-trees in the garden  
 c. The garden was planted with apple-trees  
 d. Apple-trees were planted in the garden

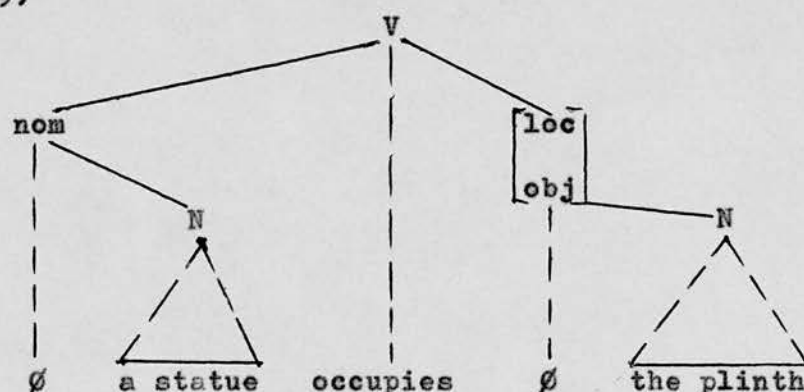
In cases like (116) and (117. a), the locative is objectivized (and the nominative, displaced as object, is marked with with), rather than subjectivized as in (112) and (117. c). Consider too fit with vs. fit in/on/to. We could allow for these by considering loc to be marked optionally (via sub-categorization and dependency

rules) as obj(ective): and we can associate the difference in implication between the members of pairs like (117. a) and (117. b) ('focus' - Fillmore, 1968a: 48 - where further examples of such phenomena are provided) with the presence versus the absence of obj. Such a locative will then undergo object-forming rules. Similar (but without erg (as in 1), or with reflexive erg (2)) are the clauses in (118):

- (118) 1. a. A statue occupies the plinth  
           b. The plinth is occupied by a statue  
       2. a. The enemy occupied the country  
           b. The country was occupied by the enemy

with the a examples containing an objectivized locative and the b examples a stative subjectivized loc. Compare too live in/ inhabit, with similar differences in implication to those we noted immediately above. We can represent the structure underlying (118. 1.a) as in (119):

(119)



#### 4.5. Reflexive and ergative locatives

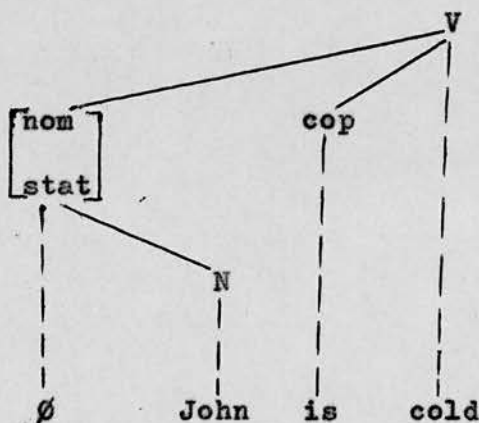
Before attempting to formulate the necessary modifications to the rules, I would like to consider one further distinction

that is perhaps relevant here. We have already allowed for erg, as well as appearing as a separate category, also to be attached as a feature to nom (by rule II. ii. 2 in (67)). We should now consider whether such a distribution is characteristic of loc too, i.e., whether there are clause-types explicable in terms of a conjunction of nom and loc. Indeed, it may be that the ambiguity of a clause like that in (120) can be related to such a possibility:

(120) John is cold

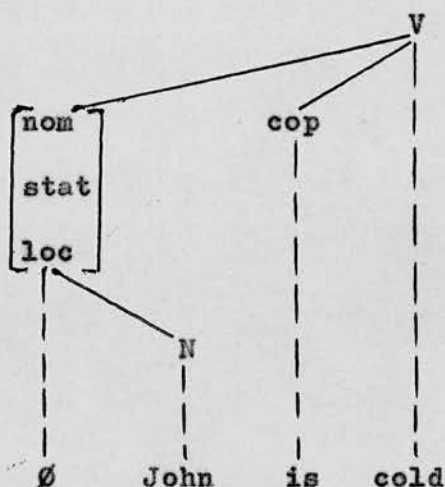
This may refer either to John's sensations or to someone else's (who, for instance, has just touched John). If we relate the second interpretation to a simple stative structure, we can perhaps account for the difference in the first one in terms of the notion 'reflexive locative'.

(121) a.





b.



(Or perhaps the relevant distinction is concerned with the attribution of a contingent rather than an inherent quality: see Gardiner, 1927: par. 141; but see further ch. 7.) This makes a certain amount of sense, intuitively. Compare more obviously locative constructions like German Es ist mir kalt (with 'formal' subject). (It may be too (though what follows is even more speculative) that we should also make allowance for a non-stative equivalent to structures like that in (121. b) - underlying, say, John suffered.) Compare also the Georgian examples in Chanidze, 1963: 18-20, where a form like mciva is paraphrased as 'a moi il y a froid'. I am hungry and the like may have an underlying structure of the type represented in (121. b) - compare the Old English construction Him hingrian with 'dative subject' (see Visser, 1932: par. 29). In view of the uncertainty with respect to such an interpretation of these forms (they are certainly much more restricted than the comparable ergative phenomena), I shall not include the appropriate rules among those proposed below. Consideration of such clauses also leads on to the question of non-spatial locatives and we shall therefore have

$$3. \quad +\text{stative} \rightarrow \text{stat} \quad // \quad \left\{ \begin{array}{l} \left[ \begin{array}{c} \text{erg} \\ \text{---} \end{array} \right] / \left[ \begin{array}{c} \text{---} \\ +\text{stative-ergative} \end{array} \right] \\ \left[ \begin{array}{c} \text{loc} \\ \text{---} \end{array} \right] / \left[ \begin{array}{c} \text{---} \\ +\text{stative-locative} \end{array} \right] \\ \left[ \begin{array}{c} \text{nom} \\ \text{---} \end{array} \right] \end{array} \right\}$$

$$\text{iii. 1.} \quad \text{nom} + V \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} \rightarrow \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} V + \text{nom}$$

CONDITION: if erg present, stat  $\neq$  [nom]

$$2. \quad \text{stat} + V \rightarrow \text{stat} \left[ \begin{array}{c} V \\ \text{cop} \end{array} \right]$$

The above rules differ from those presented in (67), as modified by (87), in the addition to the SRs of rules II. i. 3. a (the former rule 3 becoming 3.b), II. 1. 4 and II. i. 5, and to the DRs of rule II. ii. 1. b and II. ii. 2. b, and in the extension of rule 3 to allow for the attachment of stat to loc as well as to erg and nom. The term stative-ergative has accordingly been substituted for the former 'oblique' (in rules I<sub>4</sub>. i. 3. b and II. ii. 3), since erg is no longer the only category other than nom to which stat can be added. The new rule II. i. 4 allows for the possibility of subjectivization of loc in +stative clauses, and its possible objectivization otherwise; the following rule provides (in terms of +stative-locative) for the fact that in subjective non-ergative clauses stat can be attached to either loc or nom. The TRs in II. iii have also been modified in accordance with the above discussion (cf. (109) and (105)). I shall return below to the phenomena of subjectivization and objectivization, when related 'directional' clauses have also been considered, since a more adequate characterization of such raises

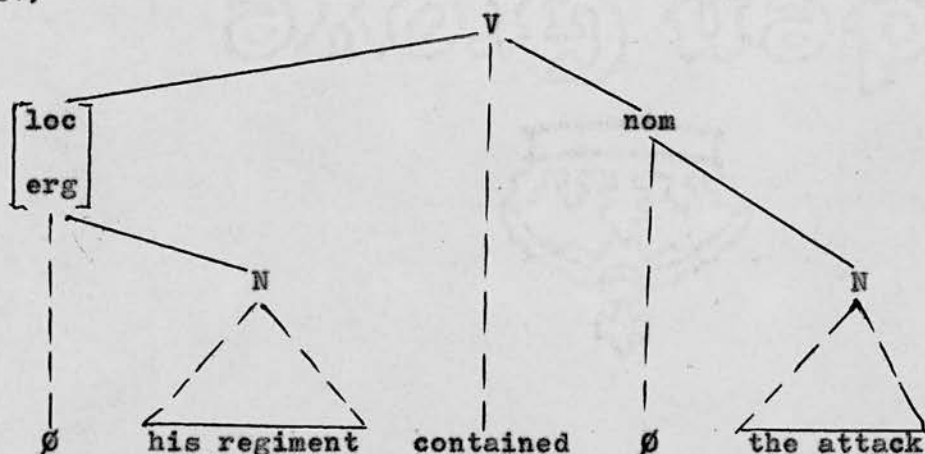
some more general considerations.

Before shifting the focus of the discussion, I would like to note (incidentally, for the moment) that just as we found that erg could be added as a feature to nom, so in examples like that in (123):

(123) His regiment contained the attack

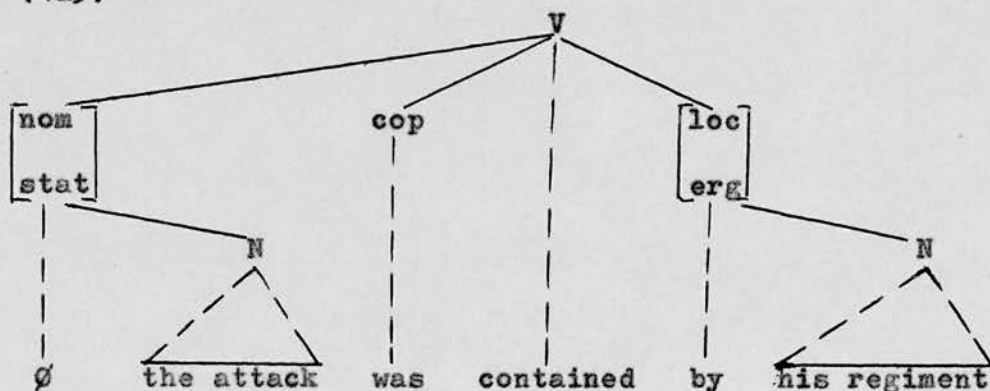
his regiment can perhaps be regarded as representing a locative phrase in which loc is marked as erg - as in (124):

(124)



Notice that we find in such a case an imperative possibility: Contain the attack at all costs! Compare too the +stative equivalent in (125):

(125)



This possibility of a conjunction of the locative category with

erg will assume some importance later in the discussion (in ch. 5), though in a rather different form; I shall delay a consideration of the rules involved until then.

#### 4.6. Ablatives

I want now to consider locative clauses that are 'directional' or 'dynamic' (in the sense of Lyons, 1968a: par. 8.4.7), as exemplified in (126):

(126) The ball rolled from Jane to Mary

This differs from the clauses containing simple ('concrete') locatives that we have been looking at in a number of respects, including the following: (1) there are two 'locational' phrases either present or implied: (2) the 'shapes' of the locational prepositions are in this instance different from those characteristic of the 'static' locatives (and from each other); (3) the verbs which occur in clauses like (126) are for the most part distinct from the locative verbs we have considered so far; (4) (126) is notionally 'non-stative', whereas the corresponding clause allowed for in pars. 4.1-.4 (e.g. The ball lay on the floor) is 'stative'.

Let us consider how we might account for such phenomena, noting, before considering this in detail, some further relevant observations. For the moment, I shall refer to the category represented by to in (126) as allative and that manifested as from as ablative (ignoring once again such further contrasts as those between from and out of - ablative/elative - and to and into - allative/illative), these indicating respectively the terminal and initial location of the nominative with respect to the 'process' involved. There exists a not inconsiderable overlap



in the 'prepositional' forms that manifest the allative and the 'static' locative in English (e.g. inside - see Sapir & Swadesh, 1932: 15-16) and other languages.<sup>1</sup> We should note too, in this regard, the 'implicational' relationship indicated by Lyons (1966: 229; 1968a: par. 8.4.7 - cf. too Traugott & Waterhouse, 1969) and represented by the 'aspectually' different pairs in (127):

- (127) 1. a. He has come here  
          b. He is here (now/~~a~~lready)  
      2. a. He has gone to London  
          b. He is in London (now/~~a~~lready)

(though of course this can be 'cancelled': He has come here often). In such cases, too, although superficially we find only one casual phrase apart from the nominative in the a examples, the other (ablative) phrase is implicit ('He has come here from somewhere else'; 'He has gone from here, or somewhere else, to London') - just as the allative is implicit in He has come. As well as the relationship exemplified by the a and b instances in (127), we must also take account of that represented in (128) - which in linking the ablative with a negative locative clause, illustrates once again (cf. par. 3.1) the relationship between the occurrence of from and a negation (cf. be absent from/be missing from (=not be in/on):

1. E.g. French *en, à, dans*. On this last, see Condillac's discussion in Le Roy, 1947: 478b. Cf. too the Ossetic locatives discussed by Vogt (1944: 22-30); and on Indo-European, see Kurylowicz, 1964: 189-90.

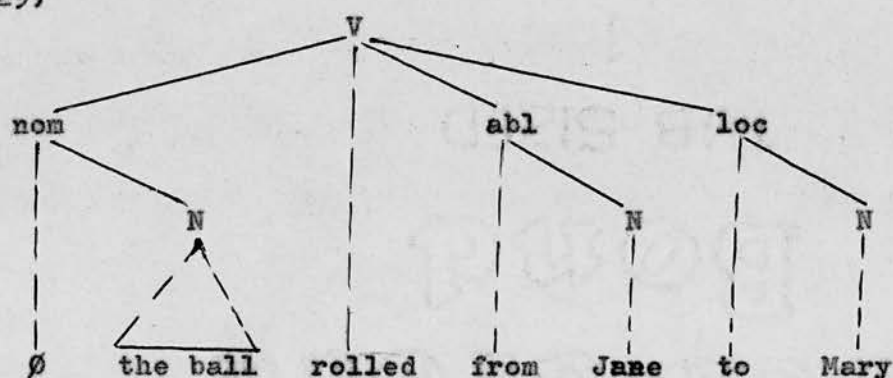
- (128) 1. a. He has come here from London  
       b. He is not in London  
       2. a. He has gone from here to London  
       b. He is not here

There would appear to be some kind of antonymic relation ( $\pm ab$ ?) between loc and abl. Stated in more general terms, loc and abl are  $\pm$ negative with respect to the semantic dimension of direction.

We can account for at least part of such phenomena, and in particular the relationship between locative and allative, in the following way. There is a subcategorization rule dependent upon (at least)  $\pm$ locative - let us call it  $\pm$ dynamic - the effect of choosing the positive of which is to introduce (via a dependency rule) the category abl(ative) before loc. The 'allative' is to be interpreted as no more than the variety of loc we find when abl is also present (in the same clause). Some prepositions are found representing loc only when abl is absent (at), others only when abl is present (to - unless loc is dative) <sup>--see below</sup> and yet others occur (as we have noted) indifferently (in this respect). Locative verbs are classified as to whether they require abl or reject it (i.e. as  $\pm$ dynamic or  $\pm$ dynamic); the verbs underlying the a and b instances of (127) and (128) differ only in this respect (cf. Lyons, 1966: 229). And presumably we are to regard the selection of  $\pm$ dynamic as overruling the 'stative' character of non-ergative locative clauses: thus (126) is notionally 'non-stative', whereas The ball lay on the floor is the reverse. This, then, would in principle allow for all the features we noted with respect to the clause in (126) (though questions remain

in the case of the ablative/negative-locative relationship). Under such an interpretation, we could suggest for (126) the (relevant) underlying structure in (129):

(129)



A similar structure to that represented in (129) underlies the a example in (127) and (128), except that in their case nom is marked as erg (and the verb is of course causative) - and also, in the examples in (127. a), the ablative phrases have been deleted. Equivalent clauses containing bring, take and send (for instance) are like (127. a) and (128. a), except that, in particular, erg occurs (with them) as a separate category (and not as a feature attached to nom). They are also causative.<sup>1</sup> Consider, too, in this connexion a verb like move, which occurs in clauses of all three types, non-ergative, causative reflexive and causative non-reflexive, as represented in (130. a), (130. b),

1. Compare the Aleut examples discussed by Jochelson (1927). Here too there is a discussion of the distinction between 'bring' and 'take' on the one hand, and 'send' on the other - which topic is also touched on in Anderson, 1968b: 310. See also Sapir & Swadesh, 1932: 32-4.

and (130. c), respectively:

- (130) a. The rock moved  
b. John moved  
c. John moved the rock

(with which both locational phrases may be deleted - as indeed in these examples).

Notice in passing that, in many clauses, at least, come and go (and bring and take) do not represent independent lexical selections (for the verb), but the occurrence of one rather than the other is dependent on the (deictic) specification of the co-occurrent locative NP. The difference in lexical content is derived (in the sense of par. 1.2). Consider the sentences in (131):

- (131) 1. a. He comes here often  
b. He comes there often  
2. a. He'll come here tomorrow  
b. He'll come there tomorrow  
3. a. He came here yesterday  
b. He came there yesterday

The a examples in (131) all contain here, which represents a locative phrase with a deictic specification referring to the present location of the speaker ('ego-deixis' - an account of which I shall not attempt to propose here). In such an environment, come normally occurs to the exclusion of go: thus, no \*He goes/will go/went here.<sup>1</sup> The situation with there is

1. Though we should note the possibility of sentences like Go here! when, for instance, directions on a map are being indicated (cf. Householder, 1966: 238). However, ...



rather more complex. Clearly, parallel to the b examples in (131), there are the following instances:

- (132)
1. He goes there often
  2. He'll go there tomorrow
  3. He went there yesterday

But the deictic specification underlying there in such cases is different from that associated with the there in the b examples in (131), and it is this difference that is reflected ultimately in the difference in phonological shape of the verb. I want to suggest that the set of specifications for there which requires come and the set which requires go are mutually exclusive. The precise division of the specifications between come-clauses and go-clauses appears to vary with different varieties of English, but one common situation is as follows. The there in (131. 3.b) refers either to the present location of the addressee or to the past (co-temporal with when 'he came') location of the speaker or addressee; there in (131. 2.b) refers either to the present location of the addressee or the future (co-temporal with when 'he will come') location of the speaker or addressee; and in (131. 1.b), there refers to the present location of the addressee (and perhaps, in some varieties of English, the future or past location of the speaker or addressee). The occurrences of there

... in such circumstances the deictic specification of the locative is obviously rather different. Observe that in Sora (Ramamurti, 1931: 27) and Pareng (Bhattacharya, 1954: par. 21), for instance, something like the distinction between 'come' and 'go' is marked by the presence or absence of a suffix: cf. Pareng i- ('go') vs. i-ai ('come').

in (132) on the other hand, represent underlying specifications other than those underlying here or there in the corresponding examples in (131). Part of the ambiguity here derives from the absence in Modern English (of most varieties) of 'second person' demonstrative ('tu-deixis') forms.

However, we also find instances like those in (133):

- (133) 1. He comes to London quite often  
2. He'll come to London tomorrow  
3. He came to London yesterday

which contain a lexically full locative NP, but which allow the same deictic interpretations as I have outlined for (a combination of) the a and b examples in (131). Unless we are to propose that in instances like those in (133) there is an independent (deictic) lexical choice between come and go, we must suppose that the locatives in (133) can be specified in a similar fashion to those in (131) - presumably in terms of speaker/addressee referential indices. The latter proposal has the advantage of restricting the specification of deixis to a single type of element. And an extension of this type of explanation will also account for the alternation between come and go in sentences like He had come/ gone to Carthage the previous year. I shall not develop here a characterization of the notion of deixis, but I think it is possible to envisage, in the light of the above, an account of the syntax of come and go in which the selection of one rather than the other is determined by deictic elements in the locative phrase in the same clause. What I have outlined in this informal manner owes much to Fillmore's (1966b) proposals, but unlike them

the account envisaged here is not interpretative, and it does not attribute semantic distinctions directly to the verb, but regards the verbal differences as a lexicalization of distinctions originating elsewhere. It thus illustrates two principles which recur throughout our discussion.

#### 4.7. Stative directional clauses

Fillmore also suggests (1966b: footnote 12) that the distinction between locative phrases like those in I am at the shop and I have come to the shop, respectively, is merely a reflexion of the distinction between 'motional' and 'non-motional' verbs (on this, cf. Vasiliu, 1968). Lyons, too, has suggested such a dependency (1966: 229). It might be worth considering too whether it could be interpreted as holding rather in the reverse direction. Both distinctions could also perhaps be regarded as in some sense superficial markers of an underlying opposition at a 'higher rank' (cf. Lyons, 1968a: par. 8.4.7). The discussion of 'directional' clauses conducted above accords with the last of these suggestions, with the 'directional' case abl introduced with respect to a verb opposition ( $\pm$ dynamic). But a simple account in terms of  $\pm$ dynamic (or  $\pm$ motional) fails to account for the fact that we find clauses which are 'directional' but nevertheless 'stative' ('non-motional'), as exemplified in (134):

- (134)    a. The road goes from London to Brighton  
          b. The fog stretched from London to Brighton

That is, in such examples we have the from and to (etc.) prepositions we associate with the selection of +dynamic (which

introduces abl), but these differ from the dynamic clauses we have been looking at so far in that they are also 'stative', as illustrated in (135):

- (135) 1. \*The road is going from London to Brighton  
2. He is going from London to Brighton

(unless perhaps 'the road' in (135. 1) is still being built!).

In par. 4.4 we associated 'stativeness' primarily with the selection of +stative. If we propose that this is also the case with respect to examples like those in (134), then stat in their case must not be attached to nom - otherwise, we would expect a copula to be present. Such a structure, with stat attached to nom, underlies rather a clause like that in (136):

- (136) It is stretched from wall to wall

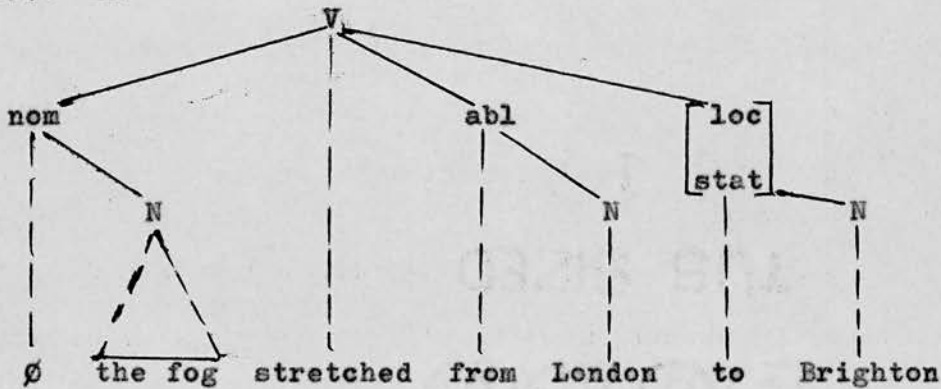
(which is 'stative' in the absence of an underlying ergative category). Let us suppose then that it is added to loc in the case of clauses like (134). We can allow for this by an extension of the rule involving  $\pm$ stative-locative to clauses that are +dynamic (as in II. i. 5 in (139) below). Thus, both (134) and (136) differ from (126) in being +stative rather than its opposite and differ from each other in the distribution of the stative element within the clause. 'Dynamic' clauses are merely the non-stative sub-type of what I shall now refer to as directional clauses.<sup>1</sup> Thus (134) have the structure represented in (137. a)

1. Clauses like The picture hangs from a hook and The grill projects from the wall are a sub-type of stative directional clause in which the orientational content of the locative phrase ('downwards', 'outwards') has been ...

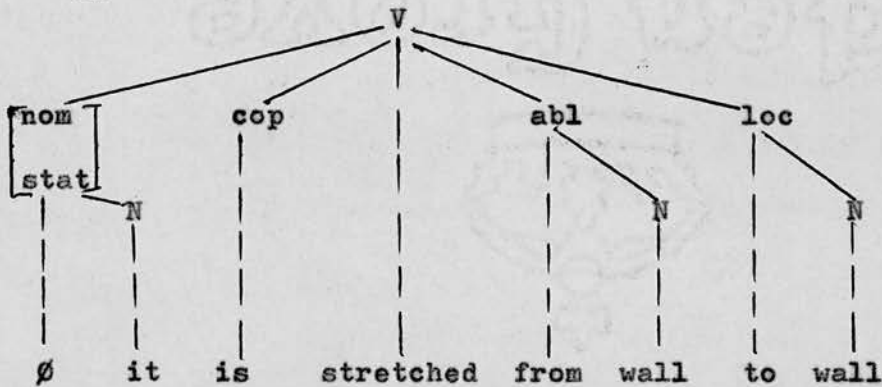


and (136) that represented in (137. b):

(137) a.



b.



#### 4.8. Synopsis

Let us try to gather these various proposals together by formulating a revised set of rules for the clause to supersede that suggested in the previous chapter. These will also allow without modification for directional clauses with an objectivized locative, as exemplified in (138):

(138) a. They reached Canada (on Tuesday)

b. He entered the room

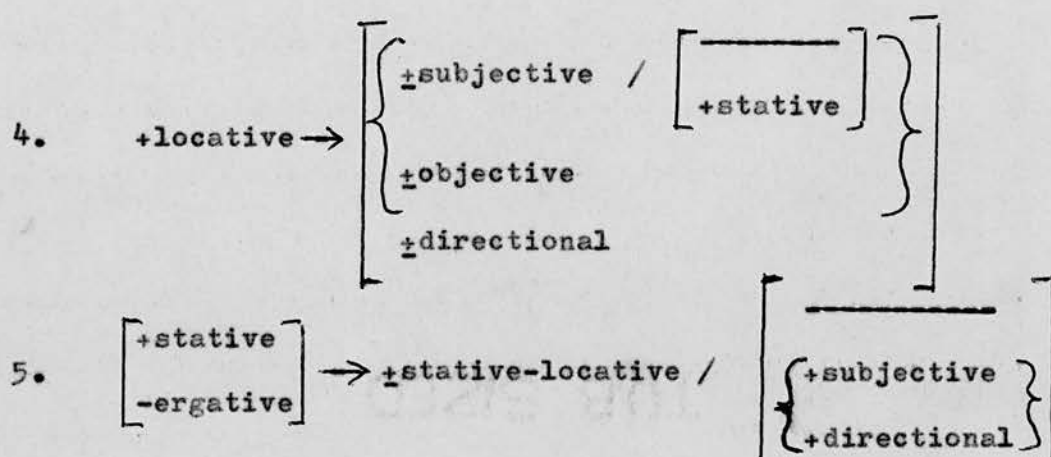
... 'transferred' to the verb (by a verbalizing rule

(cf. ch. 5)) with subsequent deletion of the locative phrase.

and for subjective clauses like London was reached on Tuesday. It is doubtful whether there are directional clauses which are +subjective but -stative-locative - i.e. which correspond to non-directional The box contains two apples. Perhaps a clause like The Rhine receives the waters of the Mosel is an example of such. The possibility is catered for by the rules proposed below. But, for the moment, I shall not attempt to provide for objective ablatives like that in They left Canada (on Tuesday) or for subjective ablatives (if any there be - Canada was soon left (behind)?); I shall return to such when we have taken into account some 'abstract' directional clauses. But it is perhaps worth noting here that once more (cf. par. 4.4) such subjectivizings and objectivizings (of loc and abl) are not semantically empty, and therefore reflect contrasting selections in the rules of semantic subcategorization. I shall use the extended set of rules presented in (139) as a basis for the following discussion:

(139)

- II. i. 1.  $V \rightarrow \begin{bmatrix} \pm \text{ergative} \\ \pm \text{stative} \end{bmatrix}$
2.  $+ \text{ergative} \leftrightarrow \begin{bmatrix} \pm \text{causative} \\ \pm \text{reflexive} \end{bmatrix}$
3. a.  $\left\{ \begin{array}{l} - \text{ergative} \\ + \text{causative} \end{array} \right\} \rightarrow \pm \text{locative}$
- b.  $\begin{bmatrix} - \text{causative} \\ + \text{stative} \\ - \text{reflexive} \end{bmatrix} \rightarrow \pm \text{stative-ergative}$



ii. The rules are as in (122) with the addition of the following, and the consequent re-ordering of the rules under 2.a to 3, 3 to 4:

2.a.  $+directional \rightarrow abl//V-$

iii. As in (122)

Rule II. i. 4 has an additional sub-part to those proposed in (122), and, together with II. ii. 2.a, it allows for what I have decided to call 'directional clauses' - which, for the reasons discussed above, seems to be preferable as a term to the former 'dynamic'. Otherwise, the rules are <sup>un-</sup>modified, except for II. i. 5, which now allows for stat to be added to loc not only when it is subjective (as in The ground was strewn with litter) but also in clauses that also contain abl (i.e. are directional), as exemplified by (134) above. However, as I have already indicated, we shall have to return below to the characterization of the subjectivization and objectivization of locatives. I am also not proposing here any rules allowing for different sequences of post-verbal casual phrases (when more than one is present). I assume that these (together with the rules preposing such phrases, when 'thematic' - Halliday, 1967: particularly par. 5) are rather superficial, though some at least

derive their motivation from the semantic representation. The sequence allowed for in the above rules is to this extent arbitrary.

#### 4.9. 'Reflexive' directional clauses

Consider finally in this chapter the clauses in (140):

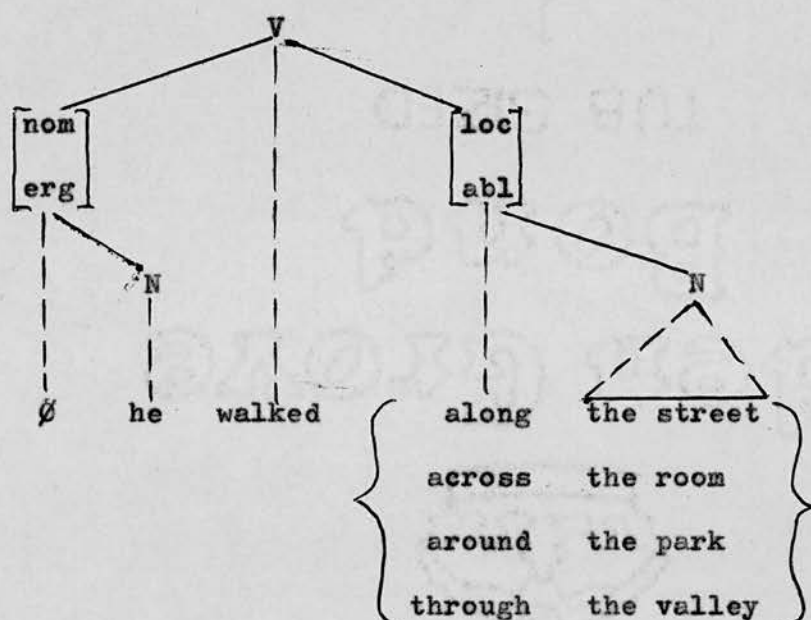
- (140)
- a. He walked along the street
  - b. He walked across the room
  - c. He walked around the park
  - d. He walked through the valley

which illustrate one further distinction in the grammar of directional clauses that will have some importance for our subsequent discussion (in ch. 6). The second (post-verbal) case phrase in each of these is clearly (semantically) 'locational' and indeed 'directional' (and the term 'prolative' suggests itself); the verb is one that elsewhere occurs in clauses containing such. But in (140) there is only one 'locational' category present (cf., with regard to a, He walked from one end of the street to the other), which situation we have associated specifically with non-directional clauses (He sat in the garden). We appear to have here then the anomaly of a directional clause containing only one 'locational' element. Observe also that the preposition, which is typically distinct from those we have associated with loc or abl, though 'directional' in some sense, does not indicate merely the initial or the final point of the movement involved, but rather both. Hjelmslev (1937: 4) characterizes the prosecutive in Avar as 'désignant "par, à travers", et par conséquent à la fois éloignement et rapprochement'. However, these facets of such clauses can be quite



naturally accounted for (and the anomaly avoided) if we allow abl, as well as being introduced as a separate category, to be added (as a feature) to loc, as in (141):

(141)



(Clauses like He walked for four miles perhaps represent a subtype of such directional clauses.) Thus abl can be 'reflexive' with regard to loc as erg is to nom. Notionally, such a characterization relates to the fact that the initial and terminal locations of the nominative N are included within a single referent. We find objectivized and subjectivized locatives in the case of this type of clause also: They crossed the river, The river was crossed. (Cf. He covered four miles/Four miles were covered.) Notice too the +stative-locative The bridge spans the river. There would indeed appear to be no unexpected restrictions; and the incorporation of rules permitting such a possibility for directional clauses should prove quite straightforward. However, because of the relevance of this distinction to the discussion in ch. 7, I shall delay the proposal of a

formulation until then.

A further type of locative category is perhaps that exemplified by the last case phrase in (142):

(142) John travelled (from Edinburgh) (to Glasgow)

$\left. \begin{array}{l} \text{via} \\ \text{by way of} \end{array} \right\} \text{Stirling}$

However, it seems possible to account for the distinctness of such a phrase in terms of a derivation involving a complex sentence in which this phrase originates in a different clause from the others. That is, (142) is perhaps related to the clause in (143) (though the suggestion of 'purpose' in (143) is perhaps stronger):

(143) John went through Stirling (in order) to travel from  
Edinburgh to Glasgow

which preserves the underlying two-clause structure in which the

case phrase containing Stirling is an ordinary  $\left[ \begin{array}{c} \text{loc} \\ \text{abl} \end{array} \right]$ . A further

variant is perhaps (144):

(144) John travelled from Edinburgh to Glasgow by going  
through Stirling

Compare the 'instrumental' set:

- (145) a. John stabbed Seymour with a knife  
b. John used a knife to stab Seymour  
c. John stabbed Seymour by using a knife

(and cf. Lakoff, 1968). It seems quite likely that the relationship between (142), (143) and (144) is similar to that between the clauses in (145) (whatever that might be), and that in

neither case is it necessary to allow for a distinct underlying kind of 'locational' or 'instrumental' case-type. Though it may be that a with-phrase is present in the 'subordinate' clause in (145. b) (cf. Chomsky, 1969b), its 'instrumental' (rather than merely locative ('comitative')) character is perhaps derived from the presence of the 'superordinate' clause - cf. John laid the tiles out on the table/ John used the table to lay the tiles out on. However, Chomsky notes that the c variant may be closer to the underlying representation.

Such a similarity in paradigm variations might (together with the notional parallel) explain the frequent syncretism found with respect to the representation of the instrumental and that corresponding to the preposition in phrases like via

Stirling - and  $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$  in general - cf. Kuryłowicz, 1964: 189.

Compare too durch in German, þurh in Old English,<sup>1</sup> and consider the examples in (146):

- (146)    a. They travelled by way of Stirling  
          b. They travelled by car  
          c. They travelled in a car

where the b and c examples would appear to be in some sense 'instrumental', but b shares the use of by with the complex directional in a, and c has the 'locative' preposition in. By has, as well as the 'instrumental' and 'directional' uses illustrated in (146), an agentive use (as marker of the category

1. Bosworth & Toller, 1898: 1077-8; Green, 1914: 519-20, 547-8.

erg). This again correlates with the relation I have been drawing, and suggests further (cf. the quotations in Murray, 1888: 1227-33) that the agentive use may be the result of a 'promotion' from 'marker of instrument' to 'marker of autonomous agent' (cf. French par?). With is itself a 'marker of the agent' in Middle English (see Green, 1914: 522); and such a process of 'promotion' is proposed as an explanation for this by Green (1914: 524-5).<sup>1</sup> As noted above, 'markers of the instrumental' (like with) also often have a simple comitative (sociative) function (as in Bill was with John/Bill came with John), which represents clearly in non-directional clauses a sub-type of locative. By too has a simple (non-directional) use, as in He lay by the roadside. And I would also suggest that the directional instances of comitative with are perhaps derived from a conjunction of a directional and a non-directional (sociative) locative (John came and Bill was with him). However, to do justice to these various relations that I have tried to indicate (in a very informal way) would divert us somewhat from our primary aim. It has merely been my intention to point to some directions by which various, apparently distinct, case uses might be reduced to combinations of those we established in this and the preceding chapters, and one sort of evidence that would be relevant. I shall now leave this area (though we shall return to 'locative' with below) to proceed to a consideration of the localist hypothesis.

1. Green also suggests (1914: 528-31, 548-50) an explanation for the use of certain other originally 'local' prepositions to mark the agent. See too on Indo-European, Uhlenbeck, 1916a: 213.



PART III



Eden Grove

Board

TUG SLED

## 5. Datives

### 5.1. Preliminaries

In this chapter, I intend to look at some instances of clauses containing what I shall call (and try to justify calling) 'abstract' locatives (and ablatives), and thus explore to what extent it is possible and desirable to propose that certain non-spatial phenomena can be explicated in such terms (i.e. as 'abstract' locatives). The discussion will follow a similar pattern to that of the preceding chapter, with initially a consideration of non-directional predications and then of clauses containing ablatives. We shall thus be concerned with an examination of certain phenomena that are not concrete and spatial (in any obvious way, at least) but which I want once more to suggest can meaningfully be regarded as involving 'abstract' locative (including directional) cases.

It is in many instances relatively easy to indicate in an informal way the common relation underlying a 'concrete' or 'spatial' use and an 'abstract' use of a particular sub-type of locative, and to show that the semantic difference between them can be attributed to the content of the associated verbs and/or NPs - as in He is in the garden/He is in the police-force/He is in a temper. But I would like to suggest that this can be demonstrated on a much wider scale than is perhaps immediately apparent, and to consider various syntactic as well as (intuitive) semantic motivations for such a suggestion.

### 5.2. Clauses with a type of abstract locative

In this spirit, I want now to look at clauses like that in (147):

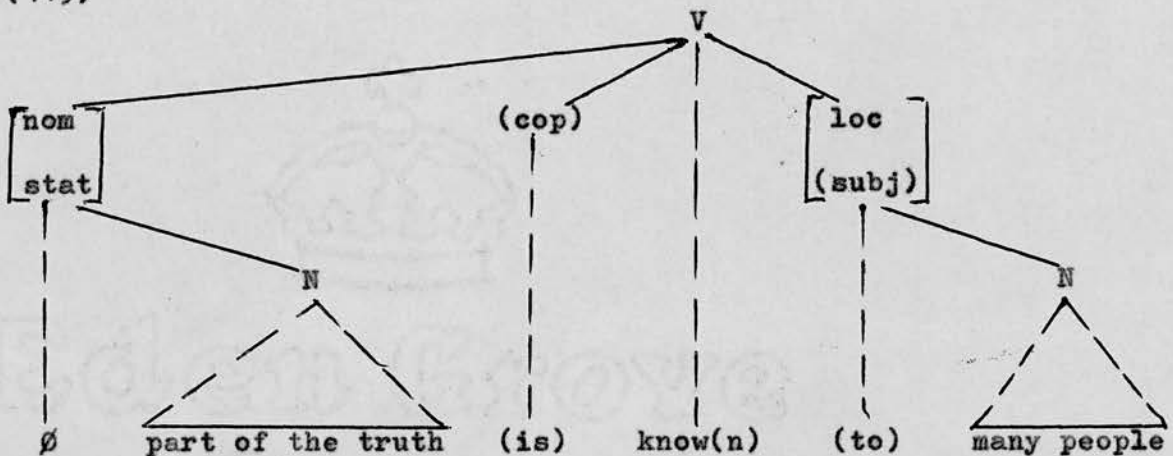
(147) Many people know part of the truth

to which there corresponds the copular clause in (148):

(148) Part of the truth is known to many people

In such clauses we have two casual phrases present. It seems reasonable to regard part of the truth as manifesting in both instances a nominative phrase, with absence of case-marker as object in (147) and as subject in (148). There remains the other case present in these clauses. It is clearly not ergative - no \*Know part of the truth or \*He knew the language with the help of a grammar or \*He knew the language assiduously - and rather than introduce another case category (as was done for the purposes of the discussion in Anderson, 1969c), it seems preferable at least to consider whether its identification as a locative can be supported. I am suggesting, then, that these two clauses have an underlying structure of the form represented in (149):

(149)



I.e. know is regarded as like contain in terms of the semantic representation governed by the V: '(knowledge of) part of the truth' is associated with ('located with respect to') 'many people'. If this is accurate, then in the case of (147) loc must be marked as subj, so that rule II. iii. 1 (as formulated in (122)) will operate to produce the correct sequence.

Various syntactic consequences should follow from such an identification as I am suggesting. Such clauses as (147) and (148) indeed share with those containing (non-ergative) contain and the like (as well as similarities with respect to possible sequences) the aspectual restriction exemplified in (150):

(150) \*Many people are knowing part of the truth

and this can presumably be related to the presence of stat, attached to nom, in both. Now, we have allowed for this kind of distribution of stat only in clauses which are +locative. Thus a generalization is captured if (147) is +locative. (106. 1.a) and (147) differ from clauses containing stat attached to a pre-verbal case ('adjectives'), both superficially (absence vs. presence of cop) and in terms of restrictions like that exemplified in (151):

- |                                |   |  |
|--------------------------------|---|--|
| (151) 1. What is the box like? | { | a. It is large<br>b. *It contains two apples |
| 2. What is Fred like?          | { | a. He is large<br>b. *He knows the time      |

(The asterisked examples can be provided with an acceptable interpretation only on rather restricted conditions.) This is allowed for if the distribution of cases and of stat is thus as in (149).

We have already observed (in separate places above) that no unmarked imperative (etc.) is possible with either type of verb: the subjects of (106. 1.a) and (147) thus do not appear to be ergative. Consider too the anomalous nature of both sets of examples in (152):

- (152) 1. a. What did he do? \*He knew the truth.  
b. What did it do? \*It contained the apples.



2. a. What was done with it? \*It was known.  
 b. What was done with it? \*It was (contained) in the box.
3. a. What happened to him? \*He knew the truth.  
 b. What happened to it? \*It contained the apples.
4. a. What happened to it? \*It was known.  
 b. What happened to it? \*It was (contained) in the box.

I think such examples make it clear that both types of clause differ in their 'behaviour' from those containing an ergative and a nominative or a simple nominative or two nominatives (cf. ch. 2), and (together with the other evidence) that there are some reasons for regarding the different types as showing a similarity in structure, in particular with respect to what is immediately dependent on V. Given this similarity, the obvious semantic differences between clauses containing know and those with contain ('mental' vs. typically 'concrete') - and presumably also the difference in prepositional marker (where not zero) - can be related to the lexical specification of the NPs and (particularly) verbs that appear in the shared locative structure. Obviously, as noted above, clauses with contain can be rendered less 'concrete' by appropriate selection of the nouns involved - as in That book contains some good ideas; it is the 'concretization' of know that is rather more restricted. It is therefore the V that embodies the crucial difference between such clauses (as has been implied by our discussion throughout).

Note finally that these two kinds of case phrase are, as we would expect of subtypes of the same case (locative), mutually exclusive with respect to their occurrence in a single simple clause. If they are not both subtypes of locative, we should have to build

such a restriction into the rules.

Together with know clauses, clauses containing understand, need, hate, love, like, etc., which show the same restrictions, can be regarded as locative. And, in general, such an account seems to be appropriate for 'affective verbs' (Vendryes, 1921: 121-5) or 'Empfindungsverben' (vs. 'Tatverben') - a distinction marked (to a certain extent) morphologically in the 'subject' (by a 'dative' inflexion) in, for instance, Georgian.<sup>1</sup> Consider Georgian examples like Svils deda ugvars ('The son (dat.) loves his mother (nom.)' - Chanidze, 1963: 20-1). Compare here Latin mihi placet, etc. Many English dative verbs (such as like and think) which now take a subjectivized locative, at an earlier stage in the history of the language preserved superficially traces of their underlying origin in the form of a dative inflexion<sup>2</sup> - cf. Old English lician + dative and þyncan + dative (van der Gaaf, 1904: pars. 13 and 16, respectively). The extension of the full

1. See Schuchardt, 1896; Finck, 1910: 133-4; Vogt, 1938: 85-92; and cf. the discussion of similar Old English phenomena below. Cf. too similar phenomena in Tamil (Winson, 1903: par. 74), or the Malayalam constructions discussed in Asher, 1968: 99-100 - though these have (superficially at least) nominal + copula rather than V: avalkku peeti-y-aanə ('Her-to fear is'); and see further on Georgian and Tagalog, Velten, 1931.
2. See e.g. Jespersen, 1894: pars. 173-80; 1928: 208-12; van der Gaaf, 1904; Mustanoja, 1960: 434-6; Visser, 1963: pars. 32-43; Poutsma, 1928: 151-61; Simko, 1957: 93-107; and the works referred to in these last two.

subjectivizing rule to such verbs appears to take place in Middle and Early Modern English (see van der Gaaf, 1904: par. 170) - though a controversy concerning this usage persisted among prescriptive grammarians for some time afterwards - and for a time occasional instances with verbs like please are found (van der Gaaf, 1904: par. 159). I have suggested that the case-inflexion ('dative') which in many languages is found associated with the non-nominative phrase with these verbs (and which is characteristic of certain other constructions) marks the variant of the locative which is found with such 'affective' verbs (and is typically animate). This suggestion would seem to accord with the apparent origin of the dative in Indo-European - as reconstructed in e.g. Kurylowicz, 1964: 190-5 ('The dative is genetically nothing less than an offshoot of the loc used with personal nouns') - and the frequent occurrence of the same inflexion or preposition for both 'dative' and 'spatial' locatives. In Manx, what corresponds to the subject of know in English is marked by a preposition meaning otherwise 'at' (ec -- Kneen, 1931: 169).

I shall try to show below with respect to certain other constructions, at least, as well as that we have been looking at, that the distribution of the 'dative' inflexion (in e.g. many Indo-European languages) is not entirely haphazard - i.e. that the 'dative' is to a considerable extent a predictable variant of the locative in their case also. (Notice too that the fact that the animate subject in clauses with such verbs is derived (in English and other languages) from an underlying locative (sometimes marked by a 'dative' inflexion) contributed to speculations on the 'passive' nature of the transitive verb.)<sup>1</sup>

1. Cf. ch. 2 and see Schuchardt, 1896; Finck, 1907: particularly 210-13.

We should note further, however, that we find by as the marker of what we are regarding as a locative case in non-subjective clauses containing, for instance, like, and that there is also a variant with by available in the case of know. Thus (153):

- (153) 1. The play was liked by some of the audience  
2. Part of the truth is known by many people

Parallel to the variation between known to and known by, we can cite beside (153. 1) the example in (154) (allowing for 'suppletion' in the sense discussed in par. 2.121):<sup>1</sup>

- (154) The play was pleasing to some of the audience

The alternation could be allowed for by a 'recategorization rule' introducing erg with respect to such case elements (a rule whose formulation I would like to postpone). The locative phrases which have undergone this rule are those which contain NPs that are compatible with erg otherwise, and are thus typically animate. (Fillmore (1968a: par. 3) regards such casual phrases as 'dative', and thus animate.) That is, the verbs which require such locative phrases are those we find permitting this type of alternation (with or without 'suppletion') - i.e. transitive affective verbs. The by-variant is possible with verbs that are stative but not 'adjectival' (cf. below). We can refer to this sub-type of locative by the traditional name of dative (typically represented in Modern English by to). Thus, dative locatives are associated with a certain semantic set of verbs which also require the sort of

1. On the like/please partial suppletion, see too Daneš, 1968: 61; Halliday, 1968: 191-5; Anderson, 1969c. Cf., for examples in German and Russian, for instance, Pontoppidan-Sjövall, 1964: 89-90.



specification for the locative NP that we have noted.

If we now take into account other types of clause containing please, like that in (155):

(155) The play pleased some of the audience

it becomes clear that we also find 'abstract' (dative) objective locatives (parallel to A statue occupies the plinth). The clause in (155) has the structure represented in (119) (and being objective rather than subjective, it does not undergo the permutation we find in Some of the audience liked the play). And we can extend the paradigm for such dative locative clauses even further, as in (156):

- (156) 1. a. Many people know some of the truth  
b. Some of the truth is known by many people  
c. Some of the truth is known/familiar to many people  
d. Many people are familiar with some of the truth  
2. a. Some of the audience liked the play  
b. The play was liked by some of the audience  
c. The play was pleasing to some of the audience  
d. Some of the audience were pleased with the play

The b and c examples show that only the 'non-adjectival' verb form permits the ergative recategorization rule mentioned above, and indeed some require its operation. The locatives in the d instances in (156) have undergone subjectivization, and the post-posed nominative is represented as elsewhere in copular clauses by with; they are the stative-loc counter-parts of the a examples. Compare the non-dative clause in (112) and the structure represented in (114. b).

Since we also find, as well as (156. 2.d), the example in (157):

(157) Some of the audience were pleased by the play

nom in subjective stative locative clauses would appear to be subject to an ergativization rule like that we have considered (but not developed) for loc. However, in this case, it would apply rather more widely than it does with respect to loc, viz. with regard to 'concrete' as well as 'abstract' locative predications. Parallel to (157) (but not dative) is (158):

(158) The plinth is occupied by a statue

(cf. (118. 1)). We shall have to reconsider this situation below.

Certain of these dative verbs (like think, believe) require (with restricted exceptions) a sentential nominative. Pleased, perturbed, annoyed, glad also typically take such. The nominative preposition with the stative but 'non-adjectival' verbs among these, is once more either by (under recategorization) or some other (typically with, as pleased, disgusted, but also others required by particular verbs, as amazed/surprised/annoyed at). With the 'adjectival' verbs we find, as expected, only the latter possibility (glad of/at, grateful for). I would like to note too, in passing, the alternation represented in (159):

- (159) 1. a. He was surprised at/by my behaviour  
b. \*He was surprised my behaviour
2. a. He was surprised at/by the fact that I had gone  
b. \*He was surprised the fact that I had gone
3. a. \*He was surprised at/by that I had gone  
b. He was surprised that I had gone

in which the reduced sentential nominative lacks the sort of preposition markers we associate with post-'adjectival' nominatives. The deletion of the nominative noun takes with it the governing case element. We shall see below that such a requirement appears to be relevant elsewhere. Compare too the sentential nominative in dative clauses like It seems to me that he was wrong (as the non-subjective equivalent of I think that he was wrong). It may be that certain modal verb forms are derived from a sub-type of stative (dative) locative clauses with a sentential nominative,<sup>1</sup> as He must be coming (cf. I am sure that He'll be coming, He's sure to be coming). Again, I shall not pursue this further here.

Apart from the rules recategorizing loc as erg (whatever their form), we have found considerable parallelism between clauses containing a nominative and what I have called a dative ('abstract') locative and clauses with a nominative and phrases to which the term 'locative' is usually thought appropriate - parallelism with respect to the variety of permitted structures and with regard to further restrictions on such clauses (as exemplified in (150) to (152), particularly). This parallelism allows us to consider that to a significant extent the same set of rules for the clause is appropriate in both instances, and that they operate upon underlying structures alike in containing (in particular) the locative category and differing only in the specifications of the NPs and, more particularly, verbs characteristic of dative and non-dative locatives respectively. The notion of 'abstract'

1. Cf. Ross, 1967: pars. 1.8-1.10; Anderson, 1969b.

locative is thus considerably extended. Thus the adoption of a more abstract but localistic view of the grammar enables us (for instance) to proceed some way towards resolving the problems concerning pairs like I liked the play and The play pleased me outlined by Chomsky (1965: 162-3), which (with others) he considers to be 'cases that suggest the need for an even more abstract notion of grammatical function and grammatical relation than any that have been developed so far, in any systematic way'. We shall have occasion below to return to others of his problematic pairs.

### 5.3. Possessive and existential clauses

Before proceeding to examine clauses of different types containing 'abstract' directional locatives, I would like to extend slightly the range of structures proposed as characteristic of non-directional clauses, and in so doing bring out once more the appropriateness of the term 'locative' to certain phenomena which are not obviously 'spatial'. This extension will involve us in a consideration of the derivation of clauses containing have as a 'main verb', the relation of the equivalents of which to locative (or 'dative') clauses has already been made clear (with respect to various languages) in a number of studies.<sup>1</sup> In many languages

1. See, for instance, Hanoteau, 1860: 85-6; Meillet, 1924; van Ginneken, 1939; Benveniste, 1960; Bendix, 1966: 37-59, 123-32; Fillmore, 1966a: 25-7; 1968a: par. 3.4; Lyons, 1967; 1968a: par. 8.4.4; 1968b; Bach, 1967; Langacker, 1968; Sedlacek, 1968; Asher, 1968: 99; Christie, 1969. In many languages, the 'possessor' is locative; in others, it is the 'possessed' which is (at least super-



the relationship between 'possessive' (in a wide sense) and locative clauses is rather obvious, even superficially. Consider in this respect Finnish clauses like those in (160):

- (160) a. Kirja on Poydalla ('The book is on the table')  
b. Minulla on kirja ('I have a book' - 'A book is on me')

See too the Chinese, Russian and Turkish examples discussed by Lyons (1968a: par. 8.4.5). Some of the studies mentioned above (e.g. Meillet, 1924) also point out the comparative recentness of have-type constructions in various Indo-European languages, and the existence of earlier 'possessive' constructions more obviously parallel to 'ordinary' locative clauses; and attempts are made to relate such developments to a general tendency towards 'personal subjects' in many of these languages (cf. like, etc.) - see Bally, 1926. It is my intention in what follows to attempt to characterize such phenomena and to formulate such of these suggestions as I can support within the framework we have been developing.

Consider in the first place a clause like that in (161):

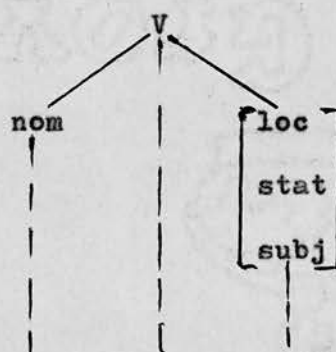
- (161) There is a book on the table

Here we appear to have a nominative phrase (a book) and two locative phrases (there - cf. He lives there - and on the table) one of which has been subjectivized, and has indeed little more semantic specification than that it is locative. Also, the clause in (161) is rather more usual than A book is on the table, and, in a sense,

... ficially) locative ('comitative'). Cf. Kikuyu Me na mĩgeka mĩingĩ, 'They are with (na) many mats' = 'They have many mats' (Gecaga & Kirkaldy-Willis, 1953: 10-11, 120-1).

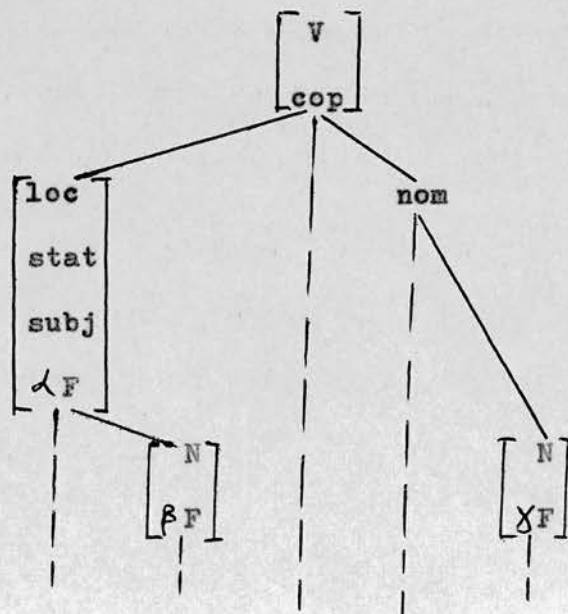
(161) might be regarded as a device for avoiding an indefinite subject in such a clause: cf. Jespersen, 1924: 154-6; Kirkwood, 1969: 101-2 - and see further below. We already have a rule for subjectivizing locatives; this situation suggests that, adapting for our present purposes Fillmore's (1968a: par. 3.4) proposals for sentences with 'expletive there', we should extend this rule to examples like (161) and derive the second locative by 'copying'. That is, we might propose the following sketch of a derivation for such a clause. The underlying structure is as in (162):

(162)



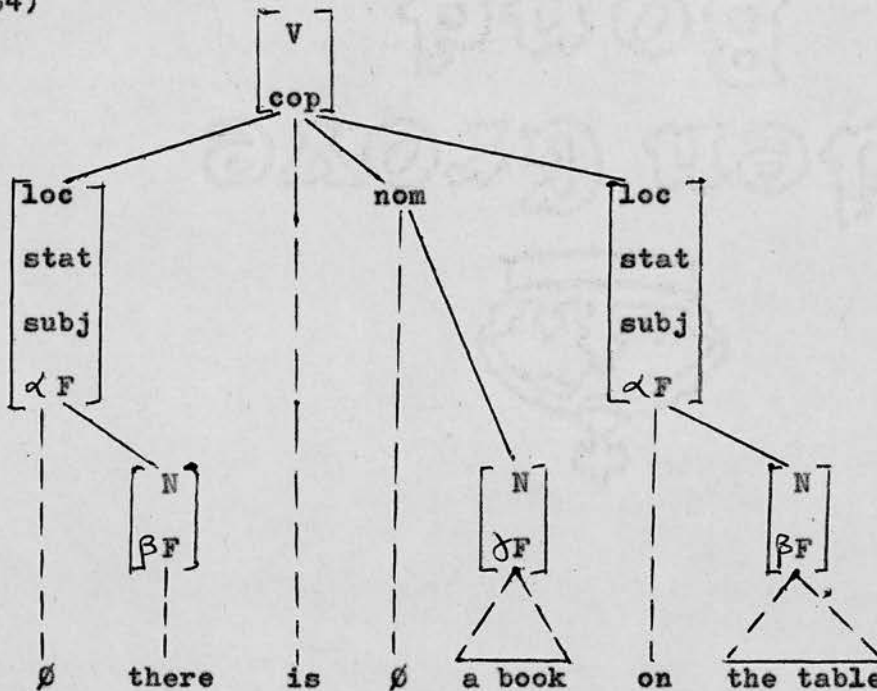
By rule II. iii. 1 (cf. (122)), loc is then subjectivized, exchanging places with nom; by III. ii. 1 the two NPs are introduced. The NPs are developed appropriately (by unspecified rules in IV) and cop is introduced after stat. The resulting structure can be abbreviated as in (163):

(163)



(where F, etc. are cover symbols for whatever the appropriate specifications, including in particular referential indices (where appropriate), may be). A late rule (which, I presume, owes its ultimate motivation to a subcategorization rule for V) then 'copies' the locative into the neutral locative position, and the first locative NP is 'expletivized' (its full lexical content now being represented in the 'copy'), as in (164):

(164)



This expletive locative subjectivization is possible in types of clause which do not otherwise permit subjectivization (which, as we have seen, is associated with certain verbs only), as is the case with the example we have been discussing.

The details of this account presuppose that the case categories are introduced in the order (in the string) suggested so far, one might want to revise such an account somewhat in view of the proposals advanced below. I have also not explored at this stage the possibility that an alternative derivation, in terms of some sort of embedding, might indeed be preferable, and we shall return

to an attempt to motivate and to characterize this in the following chapter; but this does not affect, I think, the 'localistic' conclusions I want to draw immediately below. Thus I shall for the moment refer to clauses like (161) as involving 'copying'.

There is also, it has been suggested, a further variant corresponding to (161), namely (165):

(165) The table has a book on it

Once again we have a nominative phrase (a book) and what appear to be two locatives, one subjectivized (the table), the other in the neutral locative position. Such a clause can be derived in the same way as I have outlined for (161), as represented in (162) through (164), differing only in the nature of the 'pronominalization', which in the case of the clause in (165) affects the second locative NP (and is non-locational), and in the presence of have rather than be. Has, it is clear from such examples, is at least in some instances a variant of the copula.<sup>1</sup>

However, there are different restrictions on the development of these two 'copying' variants. Consider the examples in (166):

- (166) 1. a. \*A table has a book on it  
b. The table has a book on it  
c. The table has the book on it  
d. \*A table has the book on it  
2. a. ?There is a book on a table  
b. There is a book on the table  
c. There is the book on the table  
d. ?There is the book on a table

1. As was suggested, though without support, in Anderson, 1968b: 316. See too Lyons, 1968a: par. 8.4.4; Fillmore, 1966a.



The a and d examples in (166), with an indefinite locative NP, are (as we might expect) less acceptable. Example (166. 2.c) with there and be, and a definite nominative NP, differs markedly in its interpretation from (166. 2.b): 2.c does not appear to be related to 1.c in anything like the way that 2.b is related to 1.b. Thus, 2.c would seem to require a rather different derivation (cf. Jespersen, 1924: 154-6; Lyons, 1968a: par. 8.4.3). I.e. both variants are associated with definite locatives, and the there-forms also with an indefinite nominative. Compare however the restrictions exemplified in (167):

- (167) 1. a. There's a man in the garden  
      b. ?The garden has a man in it  
      2. a. ?There's a book with me  
          b. I have a book with me

These last examples suggest that both varieties of pronominalization are possible (under the above conditions) when the nominative and the locative NPs agree in animacy, as in (166. 1.b) and (166. 2.b) or the clauses in (168):

- (168) a. There's a friend with me  
      b. I have a friend with me

If there is a discrepancy, the have variant normally occurs with an animate (and particularly a human) locative, the be variant with an inanimate. And this is in accord with the general principle favouring full animate subjects.<sup>1</sup> Thus, certain relations of implication (such that certain combinations are marked) hold with respect to the 'copying'-variant and the subcategorization of the governed NPs; these appear to throw some doubt on the interpretation of such clauses as involving simply subjectivization

1. See too Mathesius, 1929; Kirkwood, 1969: 98-9.

and 'copying'.

The clauses in b and c in (169) would perhaps allow the same sort of derivation as that we have been considering, except that the verb is not copular (the copula being segmented out) and is indeed 'abstract' in the 2 and 3 instances.

- (169) 1. a. A book was placed on the table  
b. There was a book placed on the table  
c. The table had a book placed on it  
2. a. Something is wrong with the car  
b. There is something wrong with the car  
c. The car has something wrong with it  
3. a. Something is wrong with John's leg  
b. There is something wrong with John's leg  
c. John's leg has something wrong with it

However, notice that the b and c examples show the nominative NP in each case preceding the verb; and this <sup>too</sup> might lead us to question an interpretation of such (and of (161), etc.) merely in terms of a further development (involving 'copying') of subjectivization of a locative (like that we find with verbs of the contain variety). This suggests that (at least in the case of the examples in (169)) an alternative derivation via embedding within a locative clause may well prove preferable. As I have indicated, we shall return to a consideration of this below.

'Existential clauses' like (170) presumably form a sub-type of such 'copying' clauses (however the latter are derived):<sup>1</sup>

- (170) There are elephants in India

1. Cf. e.g. Bally, 1932: par. 63; Collinson, 1937: 50; Lyons, 1967; 1968a: par. 8.4.3.

The nominative phrase in such is typically indefinite and generic. The unusualness of Elephants are in India is parallel to that of A box contains two apples. Together with (170) we find Elephants exist in India, though a modified clause like Elephants exist only in India is more usual (if less true, in this particular case). This suggests that exist is merely the semantically most neutral verb of the stand, sit, etc. type. Further, live is the form of this verb we find with human (and, along with exist) animal nominatives.<sup>1</sup> But we can interpret the 'simple' Giants exist as involving deletion of an underlying locative pro-form (cf. Kahn, 1966): cf. There are giants in existence. Thus Elephants exist only in India is doubly locative, as involving both an existential locative (reduced to exist) and a spatial locative. On such and other 'existential predications' (including clauses with happen, take place, cease) see Sundén, 1916: 44-5.

I want now to return to example (169. 3.c), with respect to which it should be observed that another possible (and perhaps more usual?) variant is that in (171):

(171) John has something wrong with his leg

in which only a (adnominal) dependent part of the locative NP appears in initial position; and it is the part in the second locative NP corresponding to it (John - his) that has been pronominalized. This possibility seems to be restricted to the dependent term in 'inalienable' relations,<sup>2</sup> in particular

1. On live/exist and temporal locatives, see Lyons, 1968a: par. 8.1.10.

2. Cf. e.g. Uhlenbeck, 1916b; Sapir, 1917b; Rosén, 1959, and the works referred to therein.

'body-parts' and the like. I do not intend here to elaborate upon this derivation (though we shall return to adnominal relations in par. 6.4), but merely to consider the possibility that a similar structure to the one appropriate to the clause in (171) underlies clauses containing have which have a 'possessive' interpretation.

Consider in this respect the sentence in (172):

(172) I have a compass

This is (at least) two-ways ambiguous, denoting either 'availability' or 'possession' (cf. Lyons, 1968a: par. 8.4.5); and it can be disambiguated as in (173):

(173) a. I have a compass with/on me

b. I have a compass among my possessions

(173. a) has (in the relevant respects) a derivation like The table has a book on it, whereas (173. b) is rather like (171).

It might be suggested that (172) is ambiguous because two rather different sorts of locative may be present in the structure underlying it; the ambiguity is the result of the operation of rules deleting these. Thus, the clause expressing the 'abstract' relation of possession (if we take it to have a derivation similar to (173.b)) is a sub-type of locative which (once again) is rendered 'abstract' by virtue of features of its structure other than the casual relations involved as such - in particular, in this case, by virtue of the specification underlying possessions. We can perhaps characterize this type of abstract locative, in an informal way, by noting that the clauses containing them differ from 'abstract' locative clauses with verbs like know in that the nominative NP is



'located' not directly with respect to the person involved, but rather with respect to something ('possession') attributed to him - and is thus doubly locative, since my possessions (for instance) is no doubt to be derived by nominalization of a clause containing the verb possess/belong, which is itself a dative locative verb (see below). Thus, under such an interpretation, possession appears to be regarded as 'inalienable', though 'possessions' are not.

It may be that it will be necessary to recognize further ambiguities for a clause like that in (172). Consider, for instance, the interpretation represented less ambiguously by I have a compass in my possession, which does not necessarily imply either immediate availability or ownership. However, I have at this time nothing to offer towards the characterization of such. And it may be that (172) is merely indifferent (rather than ambiguous) with respect to such distinctions. Notice too that the derivation for 'possessive have' that I have suggested is obviously appropriate only to instances of 'alienable' or 'separable' possession.

There is, on the other hand, a wide range of syntactic properties associated with 'inalienables'. Some 'inalienables', including 'affective' ones like He has a pleasant disposition, appear to represent a simple 'abstract' locative relation; but 'genitive phrases' involving relationship terms like his mother, etc., which are sometimes considered along with these, perhaps involve rather different derivations from those appropriate to phrases like his bad temper (cf. Anderson, 1968b: 311-13). Other instances of 'relational' nouns were discussed in ch. 1 (cf.

too Fillmore, 1969: par. 11). Certain 'inalienables' involve a 'partitive' relation: some of ..., etc; we shall argue below that these involve an adnominal ablative.

Sub-groups of 'inalienable' nouns, e.g. those denoting 'body-parts', which in many languages are grouped in terms of superficial morphology (as overt inalienables) with 'terms of relationship',<sup>1</sup> show various distinctive syntactic possibilities. In particular, they appear in clauses which seem to involve the sort of copying we found in (171) - i.e. of an adnominal constituent of the locative NP - but which are non-stative and include a particular subset of verbs. Consider the clauses in (174):

- (174) a. I broke my leg  
b. I hurt my side  
c. I burned my fingers

In one interpretation, I in such clauses represents an underlying ergative phrase; but there is another interpretation with respect to which I can perhaps (like the subject in (171)) be regarded as a subjectivization of the ('inalienable') adnominal within the locative phrase. As I have indicated, we shall return to an attempt to characterize such and other adnominal relations in par. 8.4. At any rate, two rather different semantic representations are involved. In comparison, I hurt his foot is unambiguous, and corresponds to the former interpretation of the instances in (174). On this topic, see Fillmore, 1968a: par. 5,<sup>2</sup> where

1. See once more Uhlenbeck, 1917b; Sapir, 1917b; also Lévy-Bruhl, 1916; Manessy, 1964 - and cf. Fillmore, 1968a: par. 5.1.4.
2. And, of course, many earlier studies, including de la Grasserie, 1896: particularly 91-3; Frei, 1939.

'inalienable possession' is discussed much more fully - though the account he proposes is perhaps inappropriate to terms of relationship,<sup>1</sup> and may in fact yield more generally to a more 'abstract' derivation. See also the discussion by Visser (1963: par. 320) of earlier constructions like Him brekep þe sweore ('He breaks his neck'). Notice too that lack, for instance, seems to be a (lexicalized-negative) verb which (in 'active' clauses) takes a subjectivized locative whose relationship to the object nominative is typically (though not exclusively) 'inalienable'. Compare the early history of want, as discussed in Bertschinger, 1941: particularly 6-48. In what follows we shall be concerned only with 'alienable possession'.

Returning then to 'alienable possession', we can observe that possess itself is apparently in many respects a straightforward dative verb,<sup>2</sup> one which requires the locative to be subject, and to which there corresponds the non-subjective verb belong. Compare the examples in (175):

- (175) a. I possess a compass  
b. The compass belongs to me

It may indeed be that possess is the semantically least marked dative verb (notice, for instance, how one can be said to 'possess' or 'have' 'knowledge'). With possess and belong, also, it is the case that only definite nominative NPs are eligible as subjects (\*A compass belongs to me); and this also applies to clauses with mine, etc. (\*A compass is mine), in which the verb has apparently been copularized

1. Anderson, 1968b: 311-13; de la Grasserie, 1890: 165-74.

2. Cf. once again, on Georgian, Chanidze, 1963: 20-1.

(no segmentalization has taken place) and its semantic content is 'carried' by the locative NP (which has a distinctive 'shape').<sup>1</sup>

Notice too that just as I possess the compass is somewhat unusual, so I have the compass suggests availability rather than ownership. An alternative possible derivation for 'possessive have' now becomes apparent; just as possess is the form of the verb also underlying belong that we find with indefinite nominatives, so we might consider a similar relationship to hold between the clauses in (176) (cf. Lyons, 1968: par. 8.4.4):

- (176) a. I have a compass  
b. The compass is mine

The difference between an 'availability' and an 'ownership' interpretation of (176. a) would then be associated with the character of the copular verb (rather than the deleted locative, as under the earlier proposal), simply locative in the one instance, in the other having the specification associated with possess/belong. The latter would also be that we find in (176. b) (as we have observed). In view of the greater simplicity of the deletions required with respect to this second proposal for 'possessive have', it would appear to be preferable (in the absence of other evidence). Thus, the distinction between 'possessive' and 'non-possessive' have might be said to reside simply in whether the locative is dative or not, the verb being respectively the semantically least marked dative or locative verb. However,

1. However, such sentences may indeed be complex, with an equative superordinate to a locative: i.e. That book is mine = 'That is (the) one that is to me'.



subsequent discussion will require us to somewhat modify this view.

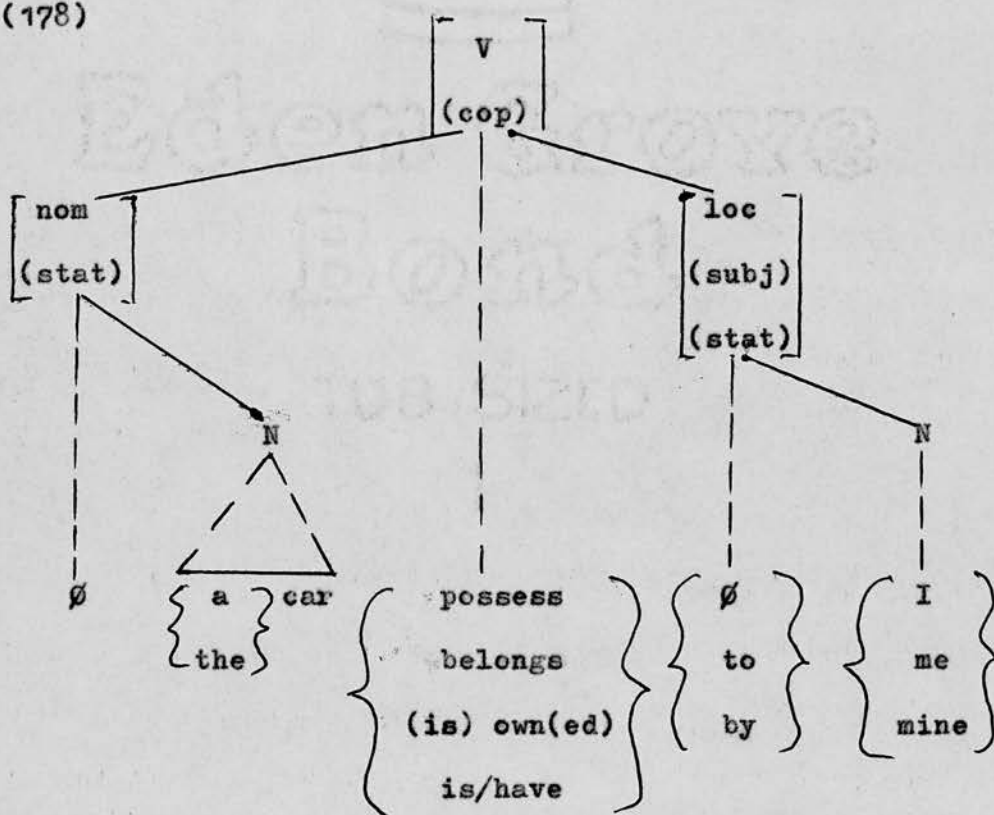
We also find with 'possessive verbs' the ergativized locative variant we associate with datives, as in (177. b):

(177) a. That company owns many stores

b. Many stores are owned by that company

If we adopt the second interpretation of the derivation of 'possessive have', then the structure underlying all the clauses in (175) to (177) can be represented as in (178):

(178)



Stat is attached to loc in the case of belong (to explain the absence of copula); otherwise it is added to nom. In accord with such a derivation, all of the verbs reject 'progressive aspect':

*italo*

- (179) a. \*I am possessing a car  
b. \*The car is belonging to me  
c. \*I am owning a car  
d. \*The car is being owned by me

I want now to move on to 'abstract directional locatives'; but before doing so, let me try to summarize. We have seen that in clauses which are also stative, the locative may or may not be subjectivized, and if it is, there may be in certain circumstances 'copying' of the subjectivized locative. (Only certain verbs (like contain) appear in clauses containing subjectivized locatives if no 'copying' has taken place.) Subjectivization is also characteristic of active clauses containing verbs like know, which involve relations that are not obviously spatial, but which I have tried (in the preceding sections) to show can reasonably be regarded as representing a sub-type of locative clause, distinguished from more 'concrete' instances in terms of the subcategorization of their particular NPs and verbs (which may be reflected in, for instance, the shape of the prepositional markers). Associated with this locative sub-type (dative) is the possibility of ergativization (to the characterization of which we shall return below). Two types of copying can be distinguished, depending on whether the initial locative phrase is pronominalized (as there) or the copy is (as it, etc.) - in which case the copular verb has the shape has. Different interpretations for have as a 'main verb' ('availability', 'ownership', etc.) can be explicated with respect to such a derivation.

5.4. Abstract direction

Examples of (different types of) rather obvious non-spatial directional clauses are once again not difficult to find. The examples in (180) form an interesting sub-type of these:

- (180) a. His mood changed from indifference to anger  
b. Her interests range from philately to epistemology  
c. They changed him from a shy youth (in)to a dangerous psychopath

(Cf. the non-directional He was in a temper, She is interested in a range of subjects, He was a dangerous psychopath (? - see ch. 8).) Again it seems reasonable to suggest that such examples differ from their spatial equivalents with respect to the specification of the nouns and verbs rather than the casual relations involved. With regard to the particular examples in (180) there are obvious restrictions to be drawn in connexion with the compatibility of the ablative and locative NPs, and both of these and the nominative NP; and once more (cf. ch. 3) difficult problems of co-reference are involved. Such clauses express 'change (or scope) of class or state' rather than 'change (or scope) of place'. However, rather than pursue at this point the analysis of clauses like these (though clearly this is not without interest, and I shall indeed return to them in ch. 8), I want to try to provide rather stronger evidence for the localist hypothesis by considering certain phenomena less obviously parallel to the 'spatial' directional locatives we looked at above. Also, the type of clause I am going to look at now can be shown to be related to some of the 'abstract' non-directional locative clauses we were

concerned with in the immediately preceding sections. In this case, their analysis as locative should be mutually reinforcing; and this, I hope, will emerge from the following discussion.

#### 5.5. A type of abstract directional clause

Consider then the familiar clauses in (181):

- (181) 1. a. John sold the book to Mary  
          b. Mary bought the book from John  
      2. a. The book was sold by John to Mary  
          b. The book was bought from John by Mary

In each of these we have three NPs present. One of them, the book, which is the object in the (non-copular) 1 examples and the subject in those in 2 (which are +stative), it seems reasonable to regard as in all cases representing an underlying nominative. Compare the examples in (182):

- (182) What happened to the book? { a. John sold it  
                                      b. Mary bought it

where the book (and its substitute) 'behaves' as we would expect of a nominative dependent on a causative verb. In the b examples in (181) John is preceded by the from preposition we have associated (among others) with the ablative category; but in (181. 1.a), as subject, it lacks a prepositional marker, and in 2.a it is preceded by the by we have found as a characteristic marker of the ergative. Mary, on the other hand, shows these latter characteristics in 1.b and 2.b respectively, while in the a examples this NP is preceded by to (a typically locative marker). Notice too that we also find imperative forms like those in (183):

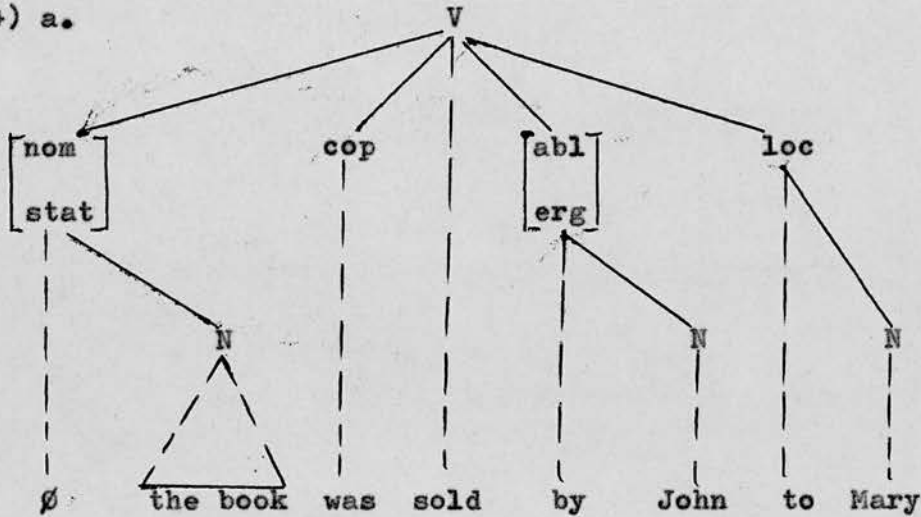
- (183) a. Sell the book!  
          b. Buy the book!



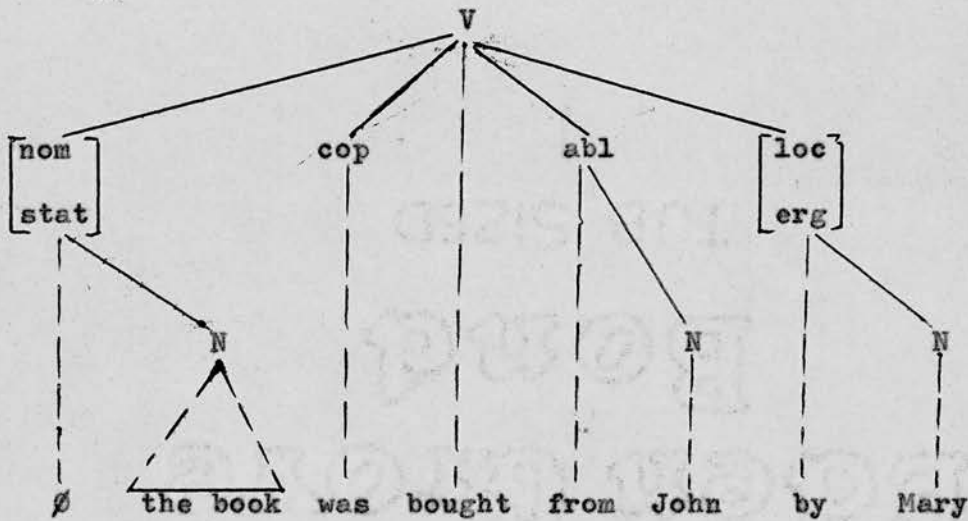
suggesting that the subjects in (181. 1) have an ergative source - thus reinforcing the evidence of the by in (181. 2). The sentences in (181) are all rather similar in meaning, but the a examples differ from the b with respect to whether the relevant 'agency' in the transaction is imputed to John (a) or Mary (b), the agent appearing as subject (in the non-stative instances) or as by-phrases (where the clause is +stative). In view of these various observations, I want to propose that all of the clauses in (181) are basically directional ('from John to Mary'), with a superimposed system of agency, such that either locative phrase can be marked as ergative. Compare Greimas' (1966: 130) comments on Eve donne une pomme à Adam: 'Le sujet Eve est le point de départ d'une double relation: la première s'établit entre Eve et pomme, et la seconde entre Eve et Adam, Eve étant à la fois actant-sujet et actant-destinateur.' Compare too de la Grasserie's (1890: 42) characterization of such to-phrases as those in (181. a) as representing an 'allatif idéalisé'.

Let us now consider the kind of structures which we might suggest as a characterization of these proposals. Those for the 2 examples in (181) can be represented as in (184):

(184) a.



b.



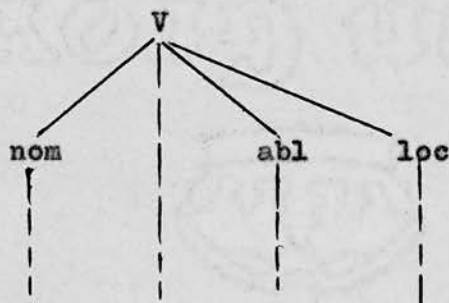
The examples in (181. 1) differ in that nom is not marked as stat, and therefore no copula is introduced, and also rule II. iii. 1 will operate to permute the nominative phrase and the particular locative phrase marked as erg (the ablative in 1.a, the locative in 1.b). Rule II. iii. 1 will thus have to be modified to allow for the fact that the ablative phrase comes between the elements to be permuted in instances like 1.b; it might be reformulated as in (185):

$$(185) \text{ II. iii. 1. } \text{nom} + \text{V (abl)} \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} \rightarrow \left\{ \begin{array}{c} \text{erg} \\ \text{subj} \end{array} \right\} \text{V} + \text{nom (abl)}$$

CONDITION: if erg present, stat  $\notin$  [nom]

These structures (in (184)) account for the distribution of by, to and from in the examples in (181), in that abl and loc have their normal markers, from and to, except when erg is attached, the presence of which requires a by if the phrase is post-verbal. They also allow for the various sequences we find there (in terms of rule II. iii. 1, as reformulated in (185)). In order to generate such structures we shall have to modify the rules of subcategorization and dependency to provide for the distribution of erg as a feature on abl and loc (with causative verbs). We have already noted (in par. 4.5) that the syntax of contain requires some such modification (though we did not implement this at that point). Thus, I am proposing that underlying all of these is a common structure that we can represent as in (186):

(186)



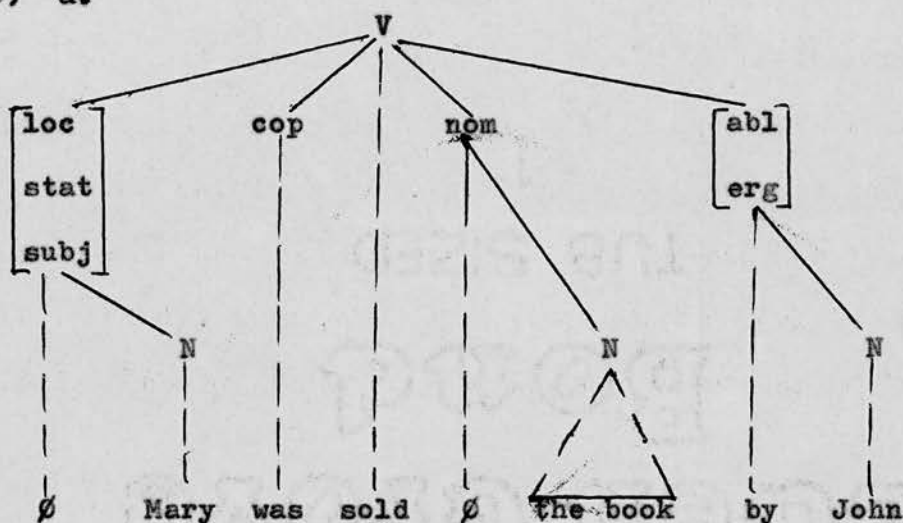
i.e. a simple directional clause. The a examples in (181) differ from the corresponding b only with respect to the distribution of erg with regard to the locative cases in this structure, and the different sequences are allowed for by this (i.e. the placing of erg) in conjunction with rule II. iii. 1.

Without essential modification, the rules also provide for variants like those in (187):

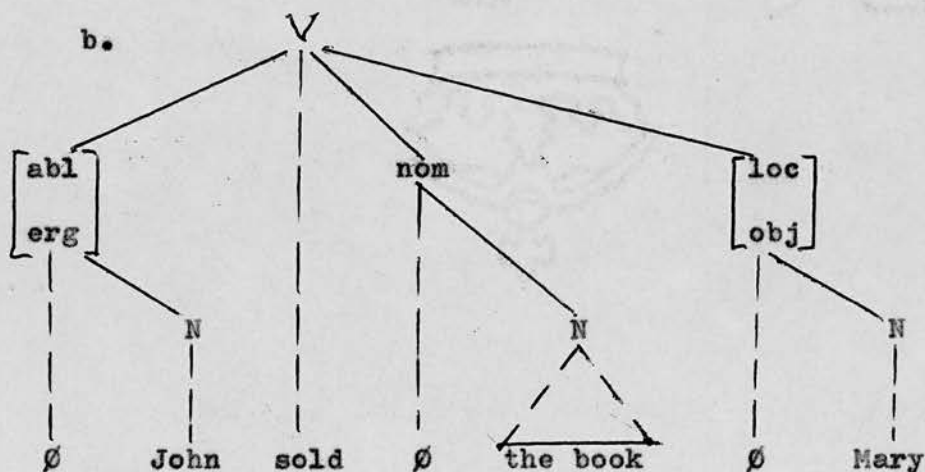
- (187) a. Mary was sold the book by John  
b. John sold Mary the book

in which the locative phrase is respectively subjectivized (in the +stative clause) and objectivized (in the -stative clause). The structure underlying (187. a) and (187. b), can be represented as in (188. a) and (188. b) respectively:

- (188) a.



- b.



Thus, both 'primary' and 'secondary' passivization (cf. e.g. Kirchner, 1962: par. 293), as well as the two kinds of object ('direct' and 'indirect') are allowed for in this way. Obviously,



we need a further rule placing the objectivized element directly after the V (a rule which in many instances will operate vacuously).<sup>1</sup> Compare with (187. a) German Mir ist ein Buch gegeben worden, wherein the form Mir reflects the locative origin of this phrase. Chomsky (forthcoming) notes differences in the presuppositions associated with an 'objectivized' variant like (187. b) and its 'non-objectivized' equivalent, and adduces this as evidence of semantic distinctions not determined by deep structure differences. However, in terms of the present account, we can once again relate this distinction to the presence or absence of obj, and a similar position can be adopted with respect to other of Chomsky's arguments involving so-called 'stylistic' transformations (cf. Halliday, 1967: particularly pars. 4-7). (We return to another such argument (Dougherty, 1970) below.)

The example in (187. a) is both +subjective and +stative-locative; a +objective and -stative-locative example would be The book was sold me by a dealer - in my variety of English, examples with other than a pronoun locative seem much less acceptable, and such a possibility (even with a pronominal locative) appears to be excluded in certain varieties of English. In examples of this kind (though this is also true for other parts of the sell paradigm) the co-occurrence of subject nominative and object locative can lead to the kind of ambiguity noted by Fries (1952: 180-2). However, although both Fillmore (1965: 13-14) and

1. With regard to English, Jespersen (1928: 301-11) discusses a large number of such clauses, and points to similar phenomena in Danish. See too, on their history in English, Jespersen, 1894: pars. 181-3; Curme, 1913: 97-101.

Kuroda (1968: 375) find such clauses acceptable (though the examples they cite contain only pronominal locatives), they do exclude I was bought a hat and A hat was bought me, which (under the interpretation discussed below) are unexceptionable in my English. Likewise, many of the passive possibilities described by Poutsma (1928: ch. 3, par. 44) as 'hardly possible' or excluded by him, I find quite acceptable; Poutsma (1926: ch. 47, par. 35(a)) also describes as 'either awkward or quite impossible' The boy was given the money.

Compare with sentences like those we have been considering, examples with send, in which one finds objectivization and subjectivization of a (animate) locative in clauses in which erg appears as a separate category from abl - as in He sent Mary a book (from Chile)/Mary was sent a book/A book was sent her. It is worth noting once again that subjectivization and objectivization apply much more widely to animate phrases than non-animate.

No +subjective and -stative-locative (or, of course, +objective and +stative-locative) variant seems possible - i.e. there is nothing corresponding to That box contains two apples. We have already noted above that it is doubtful whether we should allow for such a possibility with respect to directional clauses in general; the rules in (139) would require some additional modification in order to accommodate such a restriction. But I want to extend the discussion somewhat before considering necessary revisions to the rules.

We did not allow (in terms of the rules in (139)) for the objectivization of ablatives - though I referred in passing to examples like (189):

(189) They left Canada (on Tuesday)

*goal*  
Notionally, the effect of objectivization of the ablative is to emphasize that the gaol (the locative) is not necessarily reached; and this is marked in the locative preposition - as in They left Delhi for Colombo. However, there is some doubt about there being a subjective possibility (cf. above); and such variants also seem to be excluded in the case of verbs of the type of buy. We do not find examples of subjectivization of the non-ergative ablative corresponding to (181. 2.b), nor does there appear to be a subjectivized ablative clause parallel to (181. 1.b). As I have noted, clauses like those in (190) are quite acceptable:

- (190) a. Mary bought John the book  
b. John was bought the book by Mary

but these are related to (191) rather than (181.1b) and (181. 2b):

- (191) a. Mary bought the book for John  
b. The book was bought by Mary for John

Compare the set in (192):

- (192) 1. a. Mary brought the book for John  
b. Mary brought John the book  
2. a. The book was brought for John by Mary  
b. John was brought the book by Mary

The examples in (192) show respectively objectivization and subjectivization of what appears to be a sub-type of locative (whose derivation need not concern us at this point) in a clause where *erg* appears not as a feature on *loc* but apparently as a separate category (cf. Mary brought John the book from Canada,



with an ergative, a locative and an ablative phrase all expressed superficially). The clauses in (190) are presumably similar (cf. too Mary bought John the book from that shop). Thus, buy can appear both in clauses with erg attached to loc and in clauses in which erg is found as a separate category (in which case loc is marked by for or is objectivized/subjectivized); in the latter instance, it takes the second kind of 'indirect object' recognized by, for example, Fillmore (1965).

However, we do find clauses containing an ergative locative and an objectivized ablative with verbs other than those we have been considering. Compare John robbed Mary of the book (with objectivized ablative) and John stole the book from Mary (without such). Note too the subjective Mary was robbed of the book. (Cf. Fillmore, 1968b: 376.) Also: I asked a favour of him/I asked him a favour.

A small part of such an account of sentences like these I have outlined elsewhere (in Anderson, 1968b: 313-15 - see too Lyons, 1968b: 500), and opposed once again (cf. the discussion of come and go above) to an explanation relying on the elaboration of an interpretative semantic apparatus of some sort.<sup>1</sup> The account

1. Katz, 1967: particularly 171-3; Staal, 1967a - see too Katz, 1966: particularly 167-70; Bierwisch, 1969: par. 2.4. It seems probable to me that arbitrary devices of this nature will prove in general unnecessary with respect to such relations, at least, given a sufficiently abstract view of transformational relations (or their equivalent) and an essentially semantic interpretation of the base (ch. 1).



I have offered suggests that the selection of buy as against sell is dependent on a single distinction - a verb sub-categorization rule that determines whether erg is added to loc rather than abl; they are thus perhaps intrinsically suppletive in the sense of ch. 2.

The occurrence of other pairs with a similar syntax is illustrated in (193):

- (193) A. 1. a. John lent the book to Mary  
          b. Mary borrowed the book from John  
      2. a. The book was lent to Mary by John  
          b. The book was borrowed from John by Mary  
      3. John lent Mary the book  
      4. Mary was lent the book by John  
      B. 1. a. John taught that subject to Mary  
          b. Mary learnt that subject from John  
      2. a. That subject was taught to Mary by John  
          b. That subject was learnt from John by Mary  
      3. John taught Mary that subject  
      4. Mary was taught that subject by John

Cf. too give and obtain/get/take:

- (194) 1. a. John gave the book to Mary  
          b. Mary obtained the book from John  
      2. a. The book was given to Mary by John  
          b. The book was obtained by Mary from John  
      3. John gave Mary the book  
      4. Mary was given the book by John

Cf. too The book was given me by my uncle, with nominative subject and objectivized (pronominal) locative. Notice too that That subject was taught me by John and The book was lent me by John are quite acceptable with a pronominal locative. Observe however that take appears to be distinguished from obtain as implying the absence of a 'giver' or 'offerer' (though cf. the 'accept' use noted below) whereas obtain is neutral in this respect (just as give does not pre-suppose 'acceptance'). This use of take differs from the one in contrast with bring in that erg and loc appear in the same CS. The examples in 3 and 4 in (193) in each case correspond to the a instances in 1 and 2; once again, the absence of b clauses in 3 and 4 is related to the non-susceptibility of ablatives (with such verbs) to subjectivization and objectivization. Beside the b forms in B, there are also ablative phrases like from a/the book to which there are no a instances corresponding (since book is normally excluded as an ergative ablative - though cf. That book taught me a lot). Also, we should note that the sentences in A and B respectively, though similar in structure, nevertheless have in certain respects rather different implications. For instance, John has lent Mary the book implies that John no longer has the book, whereas John has taught Mary French does not imply that John no longer knows French (cf. T. R. Anderson, 1968). This is presumably related to the characterization of the individual verb. For a discussion of other such sentences within the framework of a case grammar of the kind proposed by Fillmore (1966a, 1968a, 1968b), see Corder, 1968, though in such an account both (what I have described as) animate locatives and animate ablatives are grouped together (rather mis-

leadingly, it seems to me) as 'datives'.

An account like the preceding would explain the absence in many languages of distinct verb-forms corresponding to lend/borrow, etc., since such pairs (as intrinsically suppletive) differ only in the character of their 'arguments'. Compare the Icelandic pair in (195):

- (195) a. Hann fekk mér bókina ('He gave me the book')  
b. Ég fekk bókina frá honum ('I got the book from him')

Cf. too Serbian pozajmiti or Faroese læna ('lend'/'borrow') or the dialects of English in which learn is equivalent to both 'teach' and 'learn'. In Modern English we find such a situation with verbs like hire and rent (from/to).

Before carrying further our discussion of such verbs, I note that one generalization that has been implicit in our discussion of these various directional clauses can be formulated in a preliminary way at this point. The possibility of objectivization of the locative in such clauses as we have been considering in this section is restricted to verbs which also permit subjectivization (in stative clauses) - cf. Curme, 1913: 110. Thus, though we find both John mentioned the book to Mary and The book was mentioned to Mary by John, neither \*John mentioned Mary the book nor \*Mary was mentioned the book by John is acceptable. We shall return to this relationship between subjectivization and objectivization below, in connexion with its relation to the ±stative opposition, and pursue there the implications of this relationship.

## 5.6. Locative and directional relationships

Once again, such a localistic interpretation goes some way towards resolving the difficulties concerning one of the problem pairs discussed by Chomsky (1965: 162-3) - see too Fillmore, 1966a: 28-9. It is indeed not surprising that there should be a connexion between the resolution of this problem and that involving please and like considered in par. 5.2. It is clear that the relationship between John is here and John has come - or rather, perhaps, The book is here and John has brought the book from the library - is paralleled by the pair in (196):

- (196) a. Mary knows Greek  
b. Mary has learnt Greek from that book

In all three cases, it seems reasonable to consider the former clause (apart from differing aspectually) to be the (stative) non-directional equivalent of the latter. Further, sentences with know and teach will show a similar, though obviously distinct relationship. If this is just, then it also provides further evidence for the identity of allative and locative. Consider the instances in (197):

- (197) a. Mary knows Greek  
b. John has taught Mary Greek  
c. Mary has learnt Greek from John

Under the proposed interpretation, Mary represents an underlying locative in all three. Such an identity also underlies the distribution of dative inflexions in languages like Latin (Mihi est liber/Mihi dedit librum), which, in this respect at least, is thus less 'random' than has sometimes been suggested. Compare 'the identical modes of expression for possession and indirect



object' in Abaza, Kabardian and Ubykh alluded to by Allen (1964: 342). Thus, just as the choice between teach and learn is dependent upon which locative category (ablative or simple locative) is ergative, so the difference between them and know is related not so much (in this case) to whether abl is present or not (we do find I know from John that ...) but rather to whether one of the locative categories is marked as ergative or not. In some significant sense, know, teach and learn in such sentences (elsewhere (with different kinds of nominative) know is associated with tell and learn) come close to being 'the same verb' - they are intrinsically suppletive, except that teach and learn are +causative. In the light of the relationship between the clauses in (197), forms for 'know' originating in 'perfects', like Greek (Sanskrit véda, Gothic wait - see e.g. Meillet & Vendryes, 1924: 203-5, 294), should not surprise us. Notice too that know can co-occur with a temporal like already normally associated with the perfect, whereas have known tends to reject it. Contain (cf. causative put in) and have and own show a similar potentiality.<sup>1</sup>

Related in the same way as the clauses in (197) with teach and know are the clauses in (198):

- (198) a. Mary understands the theorem  
b. John has explained the theorem to Mary

Cf. too remember/remind (with once again no forms equivalent to

1. However, since normally requires (as elsewhere) the perfect form - thus no \*I know that since Tuesday. In Fulani, such verbs 'are used with the preterite ending to translate English present tenses' (Taylor, 1953: 78) .

(197. c)). Buy, sell and possess (own, belong) show the same range as in (197):

- (199) a. The book belongs to Mary  
b. John has sold the book to Mary  
c. Mary has bought the book from John

and in this set belong (possess, own) is strictly non-directional (not merely non-causative), as opposed to the directional sell/buy. Compare with the examples in (199) the following:

- (200) a. Mary has the book  
b. John has lent the book to Mary  
c. Mary has borrowed the book from John

which groups lend/borrow and 'non-possessive have'. If we now consider parallel examples with give and obtain (or get) then it seems clear that either (199. a) or (200. a) could be related to such clauses as those in (201):

- (201) a. John has given the book to Mary  
b. Mary has obtained the book from John

These verbs are thus indifferent to the distinction separating the sets in (199) from those in (200). It must be marked otherwise:

I gave you it to keep/as a loan.

The naturalness of these pairings which result from our localistic interpretations of verbs like know on the one hand and like learn and teach on the other, which have their independent motivations, lends additional support to the individual proposals. And as further confirmation, we should note that we also find variants showing 'copying' (cf. par. 5.3) of subjectivized versions of either locative category, as in (202):

- (202) a. Mary had a book stolen (from her (library))  
b. Mary had a rotten peach sold (to) her

(where the (to) her in b is not deletable). We have already remarked (in ch. 3) on the ambiguity of sentences like those in (202) when discussing the derivation associated with the other (causative) interpretation.

5.7. Some non-causative directional clauses

Get is like obtain (cf. (194)), except that clauses like that in (203):

- (203) Mary got the book from John

are ambiguous between an interpretation with an ergative locative as subject and one where the locative is not ergative. That is, the first interpretation is like that for (194. 1.b); the second is rather more like that associated with a sentence like that in (204), containing receive:

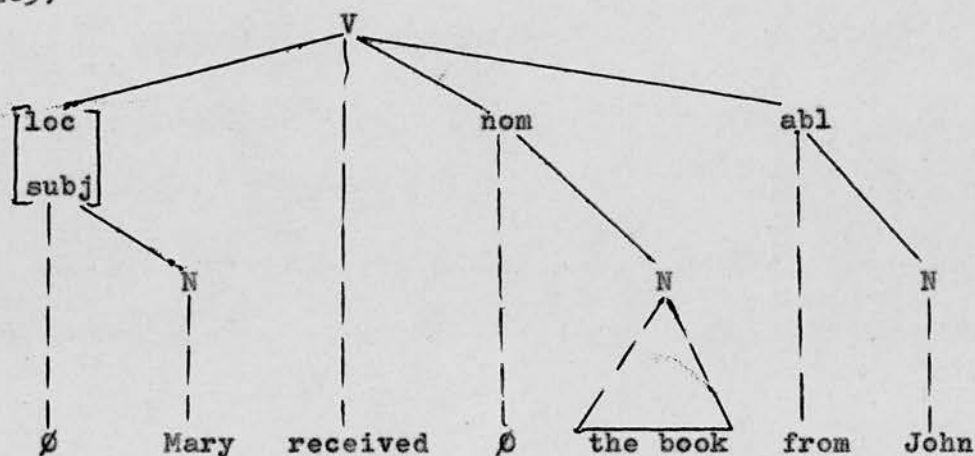
- (204) Mary received the book from John

This latter is, of course, the classic counter-example (together with suffer and a few others - see e.g. Buyssens, 1950: 40) to accounts of transitivity conducted in terms of 'actor-action-patient' and the like. Its syntax can be readily accommodated by extension of the set of rules proposed in (139), as the directional non-stative equivalent of verbs like contain.<sup>1</sup> Thus, the structure

1. On a number of such verbs in the history of English, see Sundén, 1916: 61-2. In some varieties of English, obtain appears to be ambivalent like get. Such verbs appear to permit examples of subjectivization of loc

of (204) can perhaps be represented as in (205):

(205)

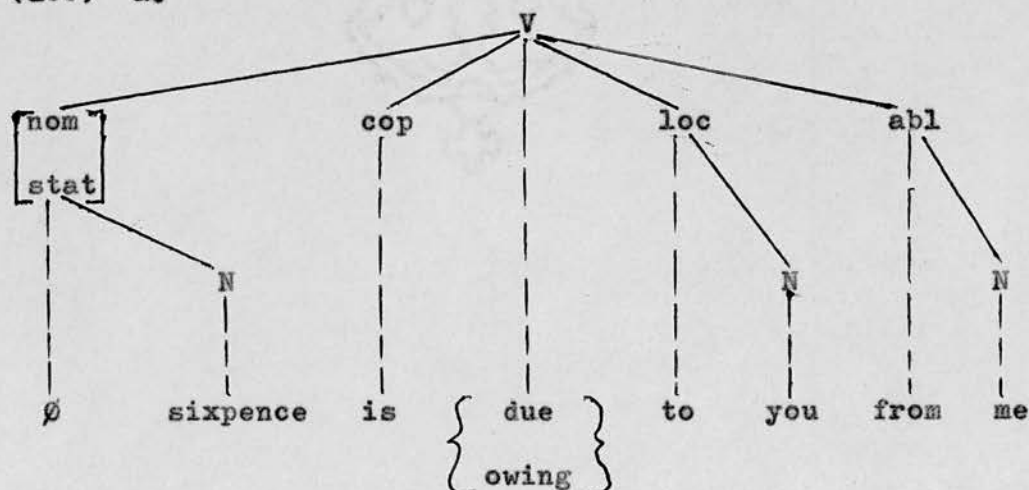


Abl is not erg - cf. I received a letter from Yugoslavia yesterday.

Learn appears to be ambiguous in the same way as get; it appears in structures like that in (205) as well as those containing an ergative locative discussed above. Consider a clause like I learned from John that she had left, which is like I heard from John ... in having a non-ergative locative subject.

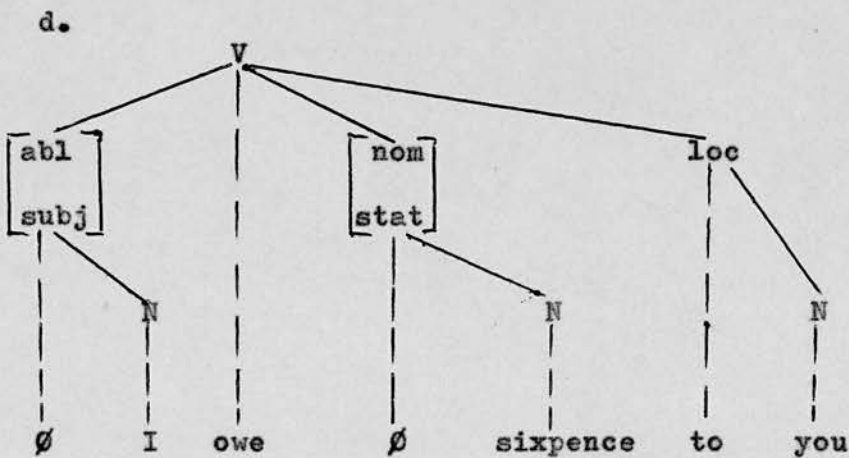
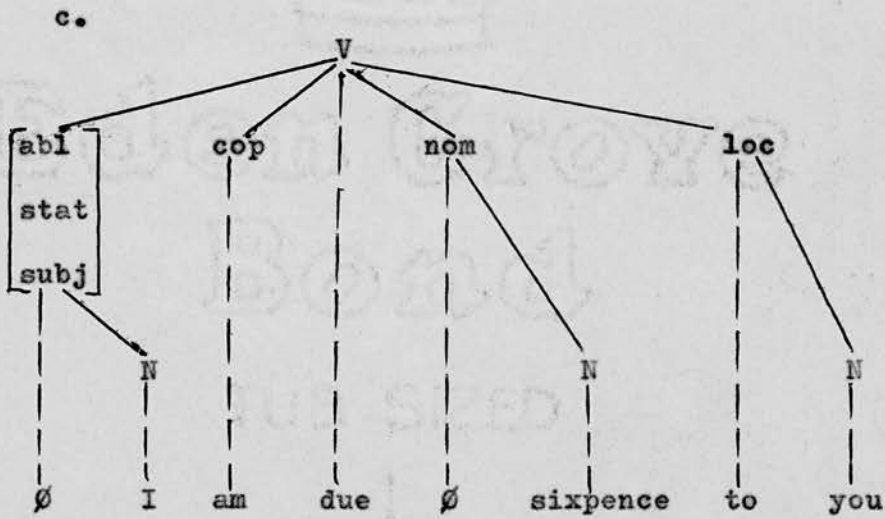
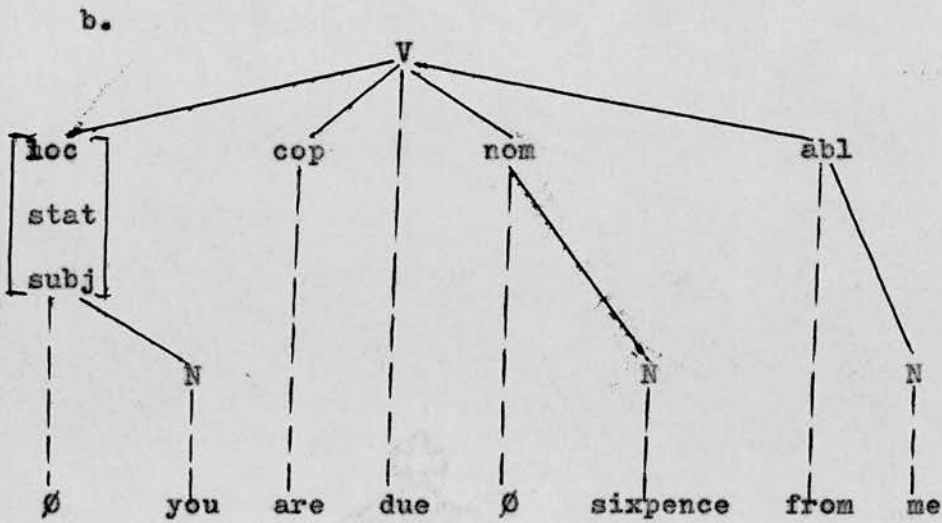
Like receive, etc., but stative (and consistently 'non-concrete'), is the verb owe/due - which however also allows non-ergative ablative subjects. We find the following range of structures:

(206) a.



... in a -stative clause, which we have not allowed for so far. We shall return to this question below.





Corresponding to a, c and d are the forms in (207) with objective

locative:

- (207) a. Sixpence is due you from me  
b. I am due you sixpence  
c. I owe you sixpence

(Cf. too Kirchner, 1937: 99-100; 1940)<sup>1</sup> The distribution of the elements stat and subj (and obj) in different positions provides for the various possible sequences and for the presence or absence of cop (depending on whether the verb is preceded by stat or not). This distribution is allowed for by the rules in (139) plus additional ones generating the conjunction of abl and stat (in (206. c)). There appears to be lacking a variant with subjective locative and stative nominative. Presumably, such restrictions on particular sets of paradigms can be formulated in terms of lexical redundancy rules.

#### 5.8. Some verbalizations, and a proposal for lexicalization

Also interpretable with respect to a simple extension of an account involving a nominative and two locatives are perhaps clauses with help and thank. Such clauses appear to be in general similar to those containing give and the like, except that in their case the underlying nominative phrase is deleted, and its lexical content is 'carried' superficially by the verb. Consider the examples in (208):

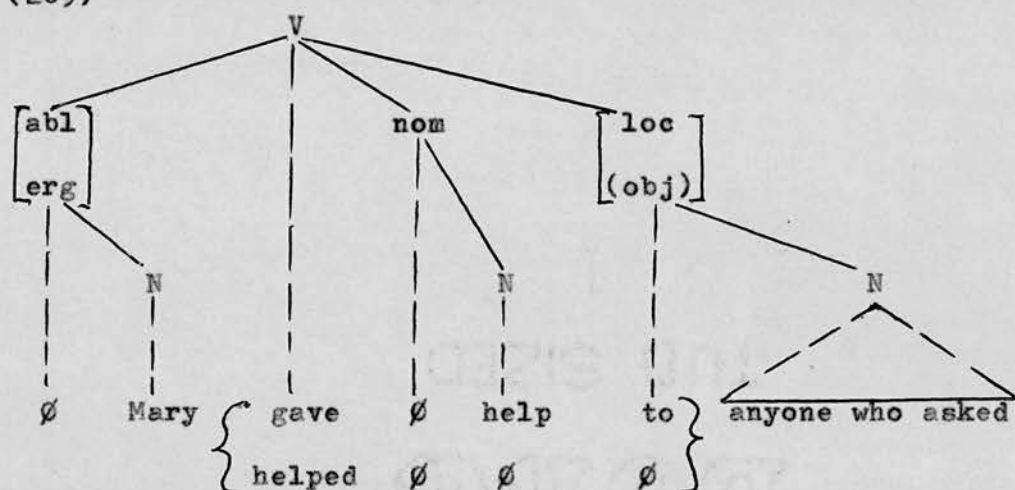
1. With reference to (207. b), we should note that Hansen (1949: 200) alludes to objectivization after 'adjectives' in Danish even in cases like Hun er ham huld ('She is him faithful' = 'She is faithful to him').

(208) a. Mary helped anyone who asked

b. Mary gave help to anyone who asked

I am suggesting that a and b are variants of a common underlying structure which includes in particular two locative phrases and a nominative - except that in 'reduced' clauses like a the locative is necessarily objective:

(209)



The lexical content that separates helped from gave is derived from the associated nominative NP. In Old English such verbs were constructed with a 'dative personal object' (cf. van der Gaaf, 1929: 3-6), and even when it becomes possible for them to appear in passive clauses with the locative in subject position, the locative NP sometimes remains in an oblique form (van der Gaaf, 1929: 7).<sup>1</sup> Cf. too German Ich helfe der Mutter. In the history of a number of languages, one finds that such verbs 'oscillate' between the one superficial construction ('transitive':

1. Many such Old English verbs are listed by Quirk & Wrenn (1955: 65), though some in their list are non-directional - i.e. take simple dative locatives.

I help my mother) and the other ('intransitive': Ich helfe der Mutter) - see e.g. Vendryes, 1921: 125-6. Cf. Basque Obeditzen du aitari ('He obeys his father'), in which the verb is 'transitive in form' but aitari ('his father') is 'dative', alongside which we find such sentences with aita in the nominative. It seems plausible to regard the distinction between (208. a) and (208. b) as minimal - i.e. a question of the presence or absence of verbalization. I am proposing, then, that both constructions can be derived from an underlying structure containing a locative, an ablative and a (deleted) nominative whose content is re-lexicalized (copied) in the verb.

Other verbs of this type are advise, assure, guide (cf. give advice to, etc.). And another of Chomsky's (1965: 162) problem pairs, viz. that in (210):

(210) a. John struck Bill

b. Bill received a blow at the hands of John

would seem to be at least in part explicable in these terms, if we consider strike to be a verb of the kind we have been considering, with an ergative ablative as subject and a locative as object and in the underlying specification a nominative which is deleted superficially. Compare John struck Bill a blow, where the verb shows the lexical content of the nominative (as in (210)) but the nominative has been retained. (Such a derivation may underlie more generally the development of verbs with semantically cognate objects.) Thus, the deeper relations in clauses like those in (210) can be shown to be much more alike than appears to be the case superficially. Chomsky's final pair is



similar but stative (and 'abstract'). Perhaps too it is necessary to provide for such verbalizations in clauses with locative (rather than ablative) subjects, as in (211. a):

- (211) a. John benefited considerably from the changes  
b. John derived considerable benefit from the changes

And no doubt we should also allow for verbalization in the case of non-directional locative causatives: cf. Everyone put the blame for the accident on Fred and Everyone blamed the accident on Fred, or, with objectivized loc, Everyone blamed Fred for the accident.<sup>1</sup> Consider too I am afraid of Mary, I fear Mary, Mary frightens me - all perhaps with a deleted nominative, the first with a (stative) subjective locative, the second with a subjective locative and objective ablative and the third with a subjective ablative and objective locative - and compare French avoir peur de.<sup>2</sup> However this may be, it seems likely that, in a number of cases, nominatives in the kind of directional (and simply locative) clause we have been looking at provide another source for the (derived) lexical content of different verbs (cf. ch. 1).

Before proceeding, I would like at this point to provide some more explicit characterization of the notion of lexicalization, particularly since this concept will be important for our subsequent discussion. The examples in (208) etc. differ from each

1. Incidentally, notice that the *for* in the last of these has presumably the same source as the *for* in the first - i.e. in the adnominal case within nom.
2. It may be that in this case too the ablative is of adnominal origin.

other superficially in that in a the underlying subconfiguration V - nom - N has been 'reduced' to a single segment ('give help' - 'help') which has the surface syntax of a V (in taking markers of tense, person-number concord etc), i.e. of the governing element. Thus, though we find passives for the 'unreduced' possibility with either help or anyone (who asked) as subject, as in (212):

- (212) a. Help was given to anyone  
b. Anyone was given help

only anyone can be passive subject in a 'reduced' sentence.

- (213) Anyone was helped

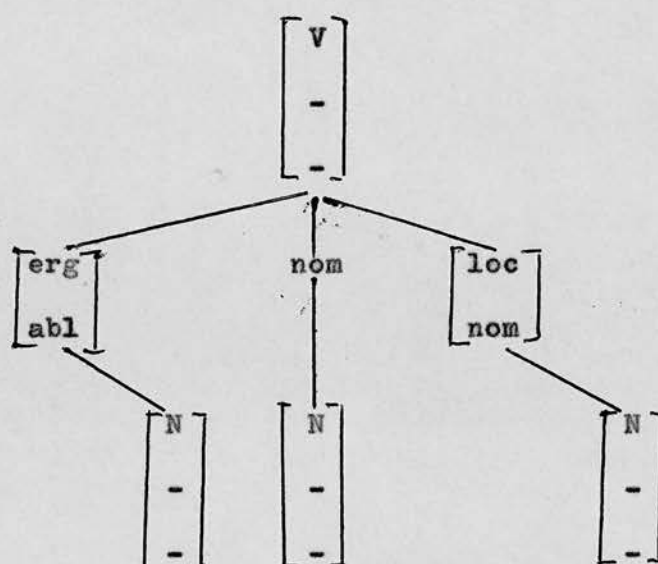
Nor is there a 'reduced' form corresponding to the sentence containing a non-nominativised locative in (214):

- (214) Mary gave help to anyone

Accordingly, the 'reduced' forms appear to be 'reductions' of structures containing a nominativised loc and in which the (non-locative) nominative phrase is the object (rather than subject).

Our task is to formulate a natural operation for relating a surface V (with respect to which help is inserted) to a complex underlying representation in which the V is merely the governing element. With regard to this, I propose that we include rules in the grammar whose function is to 'delinearise' or 'deconcatenate' certain specified subconfigurations. In a representation like (209) the nominative phrase is adjoined to V, and the noun phrase within the former is adjoined to nom. A rule of the kind I am proposing will subjoin N to nom and nom to V before insertion of the verbal item, so forming a complex segment, as in (215):

(215)



The result is, in effect, a multiparametric matrix with a single column (in the sense of the two-parameter matrices proposed for the phonology in Lass, 1970), such that the complex segment constitutes an ordered set of sub-segments. The notions of 'adjunction' and 'subjunction' introduced here are not to be confused with the use that has been made of these terms elsewhere, for instance, within the analytical framework developed by Jespersen (1924: chs. 8-10), or, more recently, with reference to operations adding constituents, to differentiate between a 'sister' and a 'daughter' relation. Within the present framework we are concerned merely with whether or not concatenation accompanies dependency in any particular instance: an element that is adjoined to another one is both dependent on it and linearly ordered with respect to it; the effect of subjunction is to obliterate the concatenation relationship. (On the notion of 'Delinearisierungstransformation' see too Maas, 1971.)

Insertion of give is blocked by the presence of the

subjoined nom - N in the complex segment, and help is introduced in accordance with the specification of the subjoined N. However, the whole de-linearised configuration has the function of a V (the governing component segment) in surface structure. Both these phenomena (the insertion of help in accordance with the specification for the lowest subsegment, and the surface status of the complex - identical with that of the highest subsegment) depend on the preservation of dependency order within the complex segment. We thus both provide for the distribution of the lexical items as shown in the examples in (212) (a with subjoining and b without), and for the fact that help in (212. a) is a V in surface structure. There is reason to believe that a similar derivation underlies the development of many surface verbs: for some further examples, see once more Porzig, 1934. In this way, such subjoining transformations serve to relate complex underlying representations to the more superficial 'reduced' structures (and in particular configurations to complex segments) pre-supposed by lexical insertion (and the subsequent phonological rules).

Above, I proposed that three processes of lexicalization for complex representations be recognized: (a) verbalisation, resulting in a surface verb from a V - case - N configuration; (b) casualisation, resulting in a surface independent case particle (adverb) from a case - N substructure; (c) nominalisation, resulting in a surface N from a N and a dependent sentence (or N). Observe that the configurations lexicalised in this way are all terminated (eventually) by N(s). I want to give some consideration now to cases (b) and (c).



Consider a sentence like that in (216):

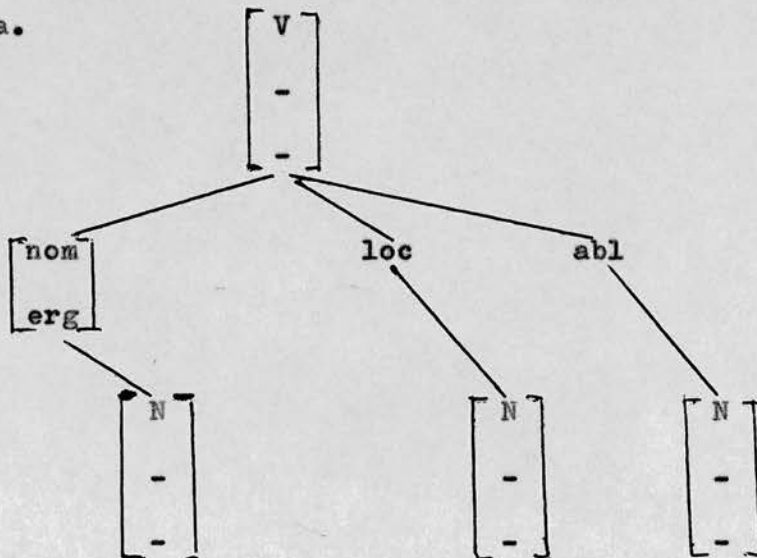
(216) John went away

Go is a directional verb, with in particular dependent loc and abl, either of which, but especially abl, may be deleted. Away is superficially unlike a locative phrase, but we do find the paraphrase in (one reading of) (217):

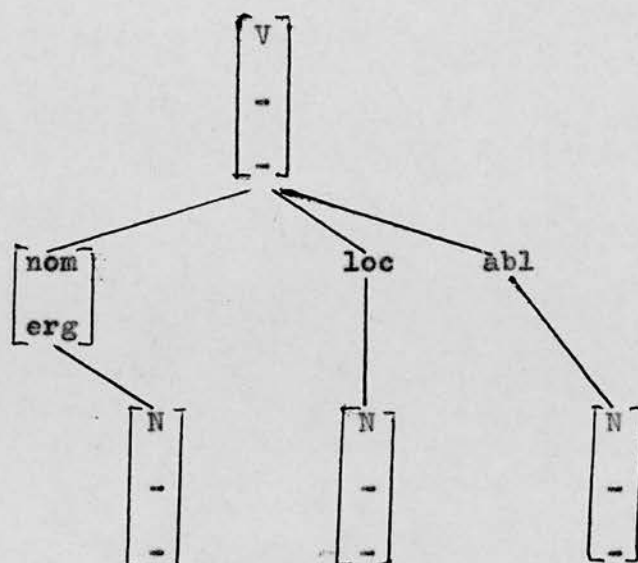
(217) John went to another place

If we allow for the formation of complex segments in something like the way I have indicated, we can satisfy the 'valences' (cf. Tesnière, 1959) for go and the like without positing a new kind of 'intransitive' loc with a specification which duplicates that for a 'transitive' loc plus certain noun phrases: in general, it is unnecessary to allow for adverbs of this kind as well as locative phrases containing N. In this particular case, then, I suggest that (216) has a superficial structure which results from subjoining of a N to a loc, a non-subjoined variant being that in (217). Thus (218. a) becomes (218. b) by subjoining of N to loc:

(218) a.



b



(Presumably, the N itself has in its turn had the dependent structure represented by another in (217) subjoined to it as part of the derivation for away.) Away is then substituted for the delinearised locative phrase in (218. b). Elsewhere is an adverb corresponding to both interpretations of to another place. (As further examples of such a process, compare now and at this time or then and at that time (and presumably this and that are themselves complex in origin).)

This example also illustrates that the item introduced with respect to the complex segment (away) need not bear any similarity in 'form' to any of the items inserted for its individual components when complex segment formation has not taken place (to another place), though historically away (for instance) is a case phrase (cf. He continued on his way). (See too the discussion of walk, below.) Sentences with depart presumably represent verbalisations of a structure containing this same configuration. Thus, lexical insertion (for complex segments) involves introduction of a formative which is in principle unique to the whole complex (away, depart) or is identical to the item inserted with respect to the lowest subsegment when it occurs independently

(help; east in He travelled east). In this way, as we have observed, lexical insertion requires preservation of dependency order within the complex segment.

Subjoining to N appears to allow for rather more varied surface structures. Take first of all a noun like footballer. We can regard this as a simple subjoining of a sentence which would otherwise appear as a relative clause, as in someone who plays football. However, we also find football player, in which the nominative phrase (football) in the original dependent sentence is immediately adjoined in front of the governing N, and only the V and an ergative phrase dependent on it are subjoined. Other structures with a V dependent on a N result in 'genitival' phrases such that the surface adnominal has a special morphological marker - as in John's father - cf. the 'non-reduced' the man who fathered John. I shall not examine the differences between these various possibilities; I desire only to indicate something of the range of application of the process of subjoining to N. Indeed, a considerable program of research is involved in the determination of appropriate constraints on such operations. For some further comments, see ch. 8.

Finally, I would like to point to certain indications that the operation of subjoining comprises two more elementary processes, copying followed by deletion. Consider a sentence like that in (219):

(219) John walked (to London)

The surface verb walk involves an underlying configuration which is expressed more fully (in some circumstances) in, say, John travelled (to London) on foot (cf. Anderson, 1968<sup>b</sup>: 308-9). But

observe that we also find sentences like that in (220):

(220) John walked on his hands

It is implausible to regard the derivation of this as including such a subjoining as I have outlined, involving the specification for on foot. What I suggest rather is this. Complex segment formation consists in the first place of copying of the relevant subconfiguration under the V (in this instance). This occurs in the derivation of both (219) and (220). Insertion of walk takes place with respect to a complex segment governed by V which also contains the specifications which in non-subjoined form appear as either on foot or on his hands. That is, the underlying distinction between (219) and (220) (which is part of the configuration subjoined to the V) is ignored by the rule inserting walk. However, the two instances differ in that in the derivation of (220), there is no deletion of the original subconfiguration once it has been copied; whereas with (219), the 'unmarked' possibility (as compared with (220)), deletion takes place. Presumably, too, in examples like He dreamed a dream, we have copying but no deletion, the result being a 'cognate object' construction: cf. He dreamed with copying and deletion, and He had a dream with no copying.

#### 5.9. Remarks on some 'performative' verbs

There is some evidence that speak is a verb like help, except that in its instance there is no objectivization of the locative, as in the example in (221):

(221) John spoke to Mary

It is like strike in that it does permit superficially an undeleted cognate object: He spoke a few words. We do find certain other



kinds of object (He spoke French, He spoke the truth), but these may be derived either from elements subordinate to the underlying nominative (cf. He spoke a few words of French) or from some other source altogether than the nominative phrase (cf. He spoke in French, He spoke truthfully). Talk seems to reject the cognate objects we find with speak, though it permits names of languages and something like He talked nonsense. Once again these superficial objects admit the same sort of interpretations (of their derivation) as were appropriate in the case of speak. Utter, on the other hand, does not take language names, and we do find He uttered a few words.<sup>1</sup> Notice further the following restriction:

- (222) a. I spoke a few words about that to John  
b. I spoke about that to John  
c. \*I spoke something about that to John

I.e. speak rejects the non-cognate object (in (222. c)); and we can explain the occurrence of (222. b) in terms of the deletion of a cognate nominative noun to which the about-phrase is subordinate. Compare with the use of speak and talk clauses like those in (223):

- (223) a. He gave a speech to the association  
b. He gave a talk to the association

which differ primarily in the degree of formality implied (clauses with the verbs speak and talk being unmarked in this respect).

Semantically similar verbs like say and tell are rather different in their superficial syntax. Thus while speak can

1. As compared with the other two, it is also aspectually restricted: He spoke for two hours, He talked for two hours, \*He uttered for two hours.

appear without a superficial object, this is not possible in their case:

- (224) a. John spoke  
b. \*John said  
c. \*John told

((224. c) is perhaps acceptable under the rather different interpretation 'John informed on someone'.) On the other hand, say and tell do permit the sort of objects excluded by speak:

- (225) a. I said something about that to John  
b. I told John something about that

Cf. too (226):

- (226) a. \*I spoke to John that I would come  
b. I said to John that I would come  
c. I told John that I would come

The range of underlying nominatives possible with say and tell suggests that they do not derive their lexical content from an underlying (usually deleted) nominative, as seemed quite probable in the case of speak, talk and utter.<sup>1</sup> This serves to characterize say and tell as compared with speak, etc. But say and tell differ with respect to whether the locative can be objectivized (and subjectivized) or not (I told John that I would come, \*I said John that I would come) and with respect to what can be deleted - the locative (in the case of say) or the nominative (in the case

1. This does not mean that their lexical content is necessarily inherent; it may be derived via some other process of lexicalization, such as from a manner or instrumental adverbial - cf. communicate verbally/by means of words.

of tell):

- (227) 1. a. I said that I would come  
           b. \*I told that I would come  
       2. a. \*I said to John  
           b. I told John

Objectivization (or subjectivization) of the locative with tell is obligatory if the nominative is deleted or is sentential (cf. I told that to John). Tell also permits a wider range of nominatives than does say, whose objects are typically sentential (as in (1. a)) or cognate (say a few words) or pro-formal (say something). Such restrictions will form part of the specification for these verbs, in the way suggested by Corder (1968) with respect to a much larger set of 'double object' verbs. Note too that such differences cannot be dismissed as semantically irrelevant in that they coincide with the different ways in which we interpret say and tell - and, for that matter, speak - however difficult it may be to formulate the distinction. Thus, tell is 'oriented' towards the animate locative (which is not deletable), say towards the (embedded) 'content' of the (non-deletable) nominative phrase, and speak towards neither (but perhaps towards the act of speaking itself).

Say and tell (but not speak, etc.) have a 'performative' use.<sup>1</sup> Such is also the case with accept and offer:

- (228) a. I (hereby) accept the proposals  
           b. I (hereby) offer my services

1. On 'performatives', see Ross, 1970, Boyd & Thorne, 1969, Householder, 1971, and the works by Austin referred to by them.



Accept and offer appear to be like obtain and give, respectively, in the case configurations they require, but they differ from them in certain interesting ways which seem to be connected with their performative potentiality. As we observed above, obtain (or get) can take a non-animate ablative (I obtained/got it from the University Library), and it does not necessarily presuppose a complementary 'giving'. Accept, on the other hand, presupposes an 'offer' of some sort (cf. buy/sell - see Lyons, 1963: 72-3), though not a completed transaction. As well as being used in the ways discussed earlier, take is sometimes equivalent to accept; a clause like John took the book from Mary is ambiguous and can be disambiguated as in (229), wherein the a instance also permits accept in place of take:

- (229) a. John took the book from Mary when she offered it  
b. John took the book away from Mary

Cf. too Does the hotel take/accept cheques? Offer similarly differs from give in implication, in that in its case, in contrast with give, the occurrence of the 'exchange' may not take place. Notice further that we also find offer with a sentential nominative:

- (230) a. John offered to come  
b. John offered to give the book to Mary

It may be that we should relate John offered Mary the book and the like to a structure such as underlies (230. b) - which would enable us to avoid having to suggest two rather different kinds of underlying structure for clauses containing offer. In a similar way, accept typically has a nominalization as nominative NP - as in (228. a). In many such instances we could substitute agree to. However, corresponding to the a instance with accept



in (231), we have rather a clause with agree like (231. b):

- (231) a. Mary accepted the book  
b. Mary agreed to have the book

It is tempting to propose that the same relation holds here as that we have suggested with respect to John offered the book and John offered to give the book: i.e. the a instance in (231) represents a reduced form of the b. This proposal with respect to accept and agree is supported by the fact that corresponding to them both we have the single antonymous verb refuse:

- (232) a. Mary refused the book  
b. Mary refused to have the book

Offer, then, expresses an enquiry concerning willingness to have (or be given); accept expresses a response indicating willingness to have. Clearly, an adequate account of such relationships will depend upon the formulation of a general theory of 'speech acts' of the kind proposed by Boyd & Thorne (1969), and the establishment of the place of such a theory within the grammar as a whole.<sup>1</sup> This lies without the scope of our present enquiry, and I shall not pursue the matter further here. However, it seemed worthwhile at this point to indicate another sort of

1. Similar considerations appear to be relevant to a further analysis of clauses containing owe, etc. in terms of a superordinate modal clause (cf. have an obligation to give back). This possibility suggests that it may be unnecessary to allow directly for subjectivization and objectivization of the abl in its case.

complexity in the relations underlying 'simple' items (cf. ch. 2) related to the group we have been mainly concerned with in what immediately precedes.

We have, however, perhaps reached a point where it might be convenient and (hopefully) illuminating to consider in detail the nature of the modifications to the rules presented in (139) which are necessitated by our subsequent discussion. The main burden of this discussion has been to reveal evidence for a localistic interpretation of some phenomena, involving in the latter sections directional clauses in many of which one of the locative phrases is also ergative. As with the 'abstract' locatives discussed initially, these are intended merely as examples of the way in which non-spatial phenomena can be given a localistic interpretation; they and the discussion that follows obviously do not constitute an exhaustive survey of such, though, as I remarked above, I do not anticipate an extension of the set of clause case categories that we have surveyed. With respect to the grammar of (139) the coverage of the rules must be extended: to allow for subjectivization and objectivization of ablatives (cf. We left Canada, etc.) and for the occurrence of stat as a feature on abl (I am due you a pound); to distribute erg as a feature on abl or loc, in addition to nom (He gave me the book/I got the book from him/They contained the enemy); and to relate such a distribution for erg to the subjectivization and objectivization possibilities for loc and abl. There remains too to be considered the fact that the rules in (139) provide for the co-selection of +subjective and -stative-locative, a possibility whose realization is rather doubtful. However, the

formulation of the required modifications entails a considerable complication of, in particular, the rules of subcategorization; and there are reasons for thinking that at least part of that complication points to a need to reconsider a number of assumptions embodied in the rules as conceived of up to this point. There are in particular two questions that I want to raise in relation to phenomena we have already surveyed. The first of them is concerned with the status of the notions of 'subjectivization' and 'objectivization', and raises important considerations concerning the nature of the underlying structural descriptions. The second concerns particularly the concept 'causative', and is connected with the further pursuit of our localistic goal. These two, in part familiar, areas will occupy our attention anew in the following chapter.

## 6. Causatives and the X-principle

### 6.1. Sequencing

The matter of this present section might seem to constitute something of a digression from our main theme. But there is involved a principle that must be clarified before we can further elaborate our argument. In this connexion, I want to review certain of the phenomena we looked at in chs. 4 and 5, in particular, I am going to suggest that an attempt to formulate a more adequate account of these phenomena has important consequences with regard to a question I have in the main avoided (or rather assumed an answer to) up to now - viz. whether or not the categories of the base are initially introduced in a significant linear order.

Various scholars in the past, and particularly more recently, have proposed formulating a 'theory of grammatical structure in terms of a non-catenating system of rules which generated not strings of elements, but unordered sets' (Lyons, 1968a: 210). Interpretable to a certain extent (at least) in this way are the proposals made by Pāṇini (cf. Whitney, 1893; Laroche, 1964; Staal, 1967b: particularly 26-45), by Tesnière (1959), by Curry (1961), by Worth (1964), by Šaumjan (1965), by Fillmore (1966a; 1968a) and by Staal (1967b).<sup>1</sup> Chomsky (1965: ch. 2, par. 4.4) is critical of such suggestions (and specifically those of Curry and Šaumjan) with respect both to English in particular and to universal grammar; and Staal (1967b), while proposing a 'set-system' for universal grammar (on the evidence of a language like Sanskrit), allows that English represents a linguistic sub-type to which the properties of such a system are largely inappropriate.

Clearly, the empirical motivations for advocating a 'set-system' for the 'base' are of a very restricted kind. Discrepancies between the superficial sequence of elements in

1. See too Lyons' own suggestions (1968a: ch. 8), and the discussion in Theban, 1968 and 1969, and Theban & Theban, 1969; and compare the characterization of 'functional' elements proposed by Pike, Halliday and their associates (cf. e.g. Longacre, 1964: 15-23, etc., Halliday, 1966: 57-9). On the relevance of historical considerations (exemplified from English), which might be used to supplement the argument developed below, see Traugott, 1969a: 5-6.



different languages obviously fail to constitute sufficient evidence, given the sort of arguments we are familiar with, for favouring one underlying order rather than the others (or some abstract order not identical to any surface sequence). Further, although they might seem to be the most obvious source of evidence, the existence of discrepancies between the underlying orders that can be shown to be appropriate (by virtue of evidence internal to each language) to different languages is not crucial. On the one hand, it could be argued that one should discriminate between 'majority' and 'minority' orders and in some way treat the latter as a special case (though I would not want to defend this position myself). On the other hand, it would still be possible, without resorting to such a device, to maintain a slightly weaker version of the 'concatenation-system' position: namely that what is universal is the principle of concatenation rather than any particular order. That is, in terms of the instances discussed by Chomsky (1965: 124), one could allow the base for different languages to generate either  $NP \hat{V}$  or  $V \hat{NP}$  (as constituents of VP), the claim then being that from the evidence internal to each language one of these orders can be shown to be appropriate for that language (cf. e.g. Ross, 1969a; 1970a: par. 2). Within any language, the underlying order is determinate; there is a set of relevant criteria that is uniform in this respect. The argument for a 'set-system' is required to show that in some respect or respects this claim cannot be met, i.e. in particular that it is after all not possible to motivate the selection of one particular underlying order. As we have noted, Staal (1967b) argues (within

the framework of a grammar like that outlined in Chomsky, 1965) that such is the position in Sanskrit. It seems to me that certain of the phenomena we have discussed above can be interpreted as providing evidence (within the framework of a case grammar like that developed in the preceding chapters) for such an argument with respect even to English, and that accordingly such languages need not be regarded (within that framework) as an exception to Staal's generalization. The interpretation obviously must be plausible on other grounds - and as our understanding of these deepens, so our particular interpretation may be modified, perhaps even destroying <sup>its full evidential value</sup> - though I consider it worth elaborating at this juncture, as one piece of evidence, within the framework developed here, for the appropriacy of a 'set-system' to a particular part of the grammar - especially since I anticipate that deepened understanding will not involve the revelation of new kinds of evidence for a 'concatenation-system'.

Thus far, subjectivization and objectivization of the locative categories have been treated as distinct 'processes' involving a pair of subcategorization rules (e.g. in II. i. 4 in (139), as reproduced in (233):

$$(233) \text{ II. i. 4. } +\text{locative} \rightarrow \left\{ \begin{array}{l} \pm\text{subjective} / \\ \pm\text{objective} \end{array} \right\} \left[ \begin{array}{c} \text{---} \\ +\text{stative} \end{array} \right]$$

Thus, to take directional examples, (234. 1) are +subjective and (234. 2) +objective:

- (234) 1. a. London was reached (on Tuesday)  
b. Mary was given the prize  
2. a. They reached London (on Tuesday)  
b. They gave Mary the prize

Loc in 1 is marked as subj, in 2 as obj. Notice that by the rule in (233) +subjective is limited to +stative clauses; +objective is operative in other - i.e. -stative-locative- clauses. The two selections are mutually exclusive: loc can be subjectivized only in +stative clauses and objectivized only in -stative. Further, the ergative verbs that permit such subjectivization are the same as those which allow objectivization. This suggests that some generalization involving both subjectivization and objectivization is being missed. Moreover, appearance as subject in +stative clauses and object in -stative clauses is the normal distribution of nom in 'verbal' clauses containing erg as a category. Compare with, for instance, (234) the examples in (235):

- (235) 1. a. Egbert was dismissed (on Tuesday)  
b. The prize was given to Mary  
2. a. They dismissed Egbert (on Tuesday)  
b. They gave the prize to Mary

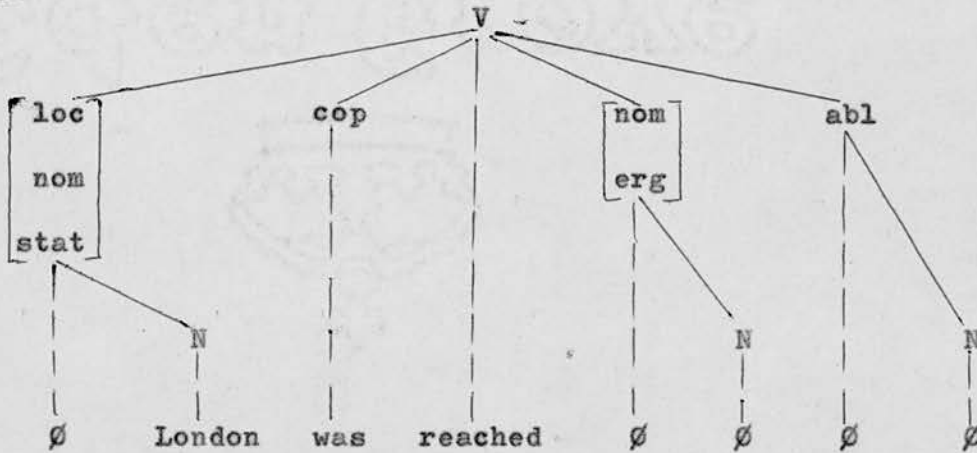
In the +stative clauses (i.e. (235. 1)) nom is subject; in the -stative, it is object. To capture this parallelism and unify the treatment of subjectivization and objectivization, I propose that we regard loc in examples like (234) as being nominativized, such that in all of them nom has been added to loc by a DR dependent on the selection of the positive term in the rule in (236):

(236) II. i. 4. +locative → ±nominative

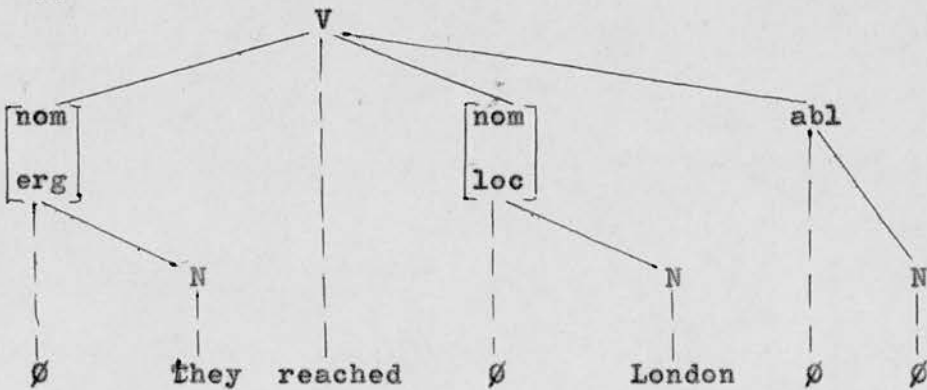
which replaces II. i. 4 in (233). If nom is added to loc in a +stative clause, then it appears as subject; if the nominativized loc is in a -stative clause it becomes the object.

Thus, the structures underlying the a examples in (234), after the operation of the objectivizing and subjectivizing rules, can be represented as in (237. a) and (237. b) respectively:

(237) a.



b.



Notice too however that (234. 1. a) must also be +stative-locative in order for cop to be introduced (after stat).

Similarly, loc in (234. 1. b) must also be marked as both nom and stat, just as nom (in 235. 1) is marked as stat. There are



also clauses in which stat is attached to nom and nom (but not stat) to loc, namely (238):

(238) The prize was given her

If neither loc nor nom is marked as stat and loc has nom attached, then we find a clause with two post-verbal noms - two objects (an 'indirect' and a 'direct'), as in (234. 2. b). Thus, it was not entirely true to say that loc is subjectivized only in +stative clauses: it is subjectivized (in the ergative clauses we have been looking at) only in +stative-locative clauses - i.e. when it is itself marked as stat. If the obligatory nom has stat added to it and nom is added to loc, then, as in (238), the nominative loc will become object and nom will be subjectivized. (Rule II. i. 4 in (233) would have had to be modified anyway, since it was originally formulated (in (122)) before such a possibility as is represented by (238) was envisaged.)

We have, then, in clauses of the type exemplified, the following possible combinations of nom, loc and stat:

(239) a.	nom	$\begin{bmatrix} \text{loc} \\ (\text{stat}) \end{bmatrix}$	e.g. (iii. 2. b)
b.	nom	$\begin{bmatrix} \text{loc} \\ \text{nom} \end{bmatrix}$	e.g. (ii. 2. b)
c.	$\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$	loc	e.g. (iii. 1. b)
d.	$\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$	$\begin{bmatrix} \text{loc} \\ \text{nom} \end{bmatrix}$	e.g. (vi)
e.	nom	$\begin{bmatrix} \text{loc} \\ \text{nom} \\ \text{stat} \end{bmatrix}$	e.g. (ii. 1. b)

Observe that even if stat is added to loc (as allowed in (239. a)), it must also have nom attached if it is to be subjectivized: thus, in (one interpretation of) It stretches to the edge stat is attached to loc (cf. par. 4.7). However, with respect to the distribution tabulated in (239), we should note also that in terms of rule II. i. 5 in (139), we have allowed for +stative-locative only in clauses which are -ergative; clearly, this rule, or our interpretation of causatives, will have to be revised. Further, it would appear that there are no examples corresponding to the +reflexive clauses in (234. a) (and (237)) - or equivalent non-directional clauses - in which stat is attached to nom.

Notice too that if we extend such an interpretation to clauses without erg, then the distribution of nom and loc can in general be straightforwardly allowed for - if we assume that nom (obligatory or attached to loc (or abl)) is pre-posed if stat occurs in the same CS. Thus, the examples in (240) are such:

- (240) a. Papers are strewn over the floor  
b. The floor is strewn with papers

a having stat attached to (obligatory) nom, b to  $\begin{bmatrix} \text{loc} \\ \text{nom} \end{bmatrix}$  and in

them  $\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$  is subject; otherwise, the obligatory nom must be subject:

- (241) a. The tower stands on a hill  
b. The tower occupies a hill  
c. Bill died/is dead

But this fails to account for the sequence of (242):

- (242) a. Mary knows the truth  
 b. Mary received a prize  
 c. Mary owes me sixpence

in which, though in a and c nom is marked as stat, loc (or abl) has been subjectivized. I propose that we retain for the moment the +subjective distinction with regard to such clauses: in these examples in (242) loc (or abl) is marked as subj, and this overrides the presence of  $\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$ . The examples in (243) are -subjective:

- (243) a. The truth is known to Mary  
 b. Sixpence is  $\left\{ \begin{array}{l} \text{owed} \\ \text{due} \end{array} \right\}$  to me

The expression of the generalization embodied in the notion of 'nominativization' presents certain problems for a 'concatenation-system'. Notice, for instance, that the clauses containing erg, if interpreted in the way I have suggested, introduce an interesting dilemma for such - which is as follows. If we account for the distribution of loc as subject and object in +ergative clauses in terms of its subcategorization as nom, with the selection of the subject or object position for it being dependent on whether it is marked as stat or not - i.e. dependent on the same consideration as determines the position of the obligatory nom in clauses in which erg is present as a category - then it should be possible to accommodate this in terms of some natural extension of rule II. ii. 1 (cf. (67)), re-stated here:

(244) II. iii. 1.    nom + V + erg  $\rightarrow$  erg + V + nom

CONDITION:    stat  $\notin$  [nom]

But, clearly, on the assumption that a post-verbal position is the neutral one for loc (as occurrences of non-nominativized loc suggest), a rule distributing nominativized loc appropriately will have to be rather different from II. iii. 1, in that loc requires to be shifted to a pre-verbal position in circumstances when (obligatory) nom is already so placed by the DR that introduces it. But II. iii. 1 (as in (244)) allows for the distribution of nom in an obvious manner, given the normal pre-verbal position of nom in clauses without the category erg. The 'unmarked' distributions for loc and nom conflict with respect to the formulation of such a rule. Thus, it would be difficult to express the generalization concerning the distribution of nominativized loc and nom in a natural way. And I suggest that this derives from the requirement (associated with the 'concatenation-system') that nom and loc be introduced by the DRs (i.e. from the first) in their respective 'neutral positions'.<sup>1</sup> If this requirement (and the associated assumption of determinacy of 'neutral positions') is dropped, and we choose (say) to introduce nom and loc arbitrarily in one of the orders which permit an extension of the equivalent of the rule in (244) to nominativized loc, then the initial ordering is clearly vacuous.

1. We did, in fact, observe difficulties with respect to the formulation of the original rule, attributable, I would suggest, to similar considerations, and resolvable once again with regard to the proposal made in what follows. See further immediately below.



If it is retained, then (as I have tried to show) the criteria for the 'neutral positions' conflict.

Let us review also, at this juncture, some of the problems connected with the relative distribution of erg and nom. In accordance with the position of nom in intransitive clauses, we formulated a rule which introduced it pre-verbally, with a subsequent shift to post-verbal position in active transitive clauses. Now, this entailed the introduction of erg post-verbally, with once again the (pre-verbal) active sequence being allowed for by (244). It might seem preferable (in view of the relative 'markedness' of actives and passives) to have erg also introduced pre-verbally. We would then have to replace (244) by two (albeit individually shorter) rules, one placing nom in a postverbal position in actives, the other so locating erg in passives. This is not a great disadvantage; more significant is that we are once again confronted with an indeterminacy. If both erg and nom start off as pre-verbal, which comes first, and why? An alternative which avoids this problem would involve the suggestion that nom is placed differently depending on whether (-reflexive) +ergative is chosen or not. However, this begins to approximate to the solution I have in mind, which, rather than complicating, will allow us to simplify the subcategorization rules, at the cost of a general constraint on sequential possibilities.

Suppose rather we decide to introduce the categories simply as members of an unordered set rather than as elements ordered in a string. The various different sequences of elements can then be allowed for by sequencing rules,<sup>1</sup> which (in any

1. Forming part of Chafe's (1967) process of 'linearization'.

particular instance) determine the appropriate order in accordance with which combination of categories and features is present. For instance, if erg is present and neither nom nor (nominativized) loc nor abl (if any or all of them are present and separate from erg) is marked as stat, then erg is placed by the sequencing rules in subject position. Let us try to formulate such rules more precisely. We shall assume that DRs introduce categories as members of a set - i.e. that all right-hand side environments of the form 'cat<sub>i</sub>' or 'cat<sub>i</sub>' have been eliminated. DRs which introduce features (rather than categories) in effect form subsets within this set, and we must thus continue to specify the environment for such.

Let us consider first of all the clauses containing erg as category that we have been most concerned with in the preceding argument. We shall add then what rules are necessary for clauses lacking such an erg. Of the clauses containing erg, those in which a CS including nom also includes stat have a rather different sequence from those in which stat is either attached to erg or is lacking. Accordingly, the first two sequencing rules might be formulated (in a preliminary fashion) as in (245), replacing II. iii. 1 in (244):

$$(245) \text{ II. iii. 1. } \left\{ \begin{array}{l} \left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right] \quad V \text{ (nom) (abl) (loc) erg} \\ \text{erg} \quad V \text{ (nom) (nom) (abl) (loc)} \end{array} \right\}$$

The first part of the disjunction states that given the presence in the set of cases of  $\left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right]$ , erg and optionally nom, loc, abl, the appropriate sequence is as represented there. The second part is to be similarly interpreted. The ordering of the

second part is to be similarly interpreted. The ordering of the two parts reflects a 'sequencing hierarchy' among the cases, such that, in this instance in particular, the presence of  $\begin{bmatrix} \text{nom} \\ \text{stat} \end{bmatrix}$  'over-rules' the pre-posing of erg. There is no simple clause which contains all the categories listed, but in terms of this full set of obligatory and optional elements we provide for the full range of clauses containing at least erg and <sup>optionally</sup> a CS which has in it both nom and stat.

The first part of the rule allows for the sequence of case phrases in each of the examples in (246):

- (246) a. Mary was sent the book (from Australia) (by John)  
b. The book was sent her (from Australia) (by John)  
c. The book was sent to Mary (from Australia) (by John)  
d. Mary was sold the book (by John)  
e. The book was sold her (by John)  
f. The book was sold to Mary (by John)  
g. Mary was robbed of the book (by John)  
h. The book was stolen from Mary (by John)  
i. The country was occupied (by his troops)  
j. London was reached  
k. (?) Canada was left  
l. The book was destroyed (by John)

which all involve subjectivization of an original nom or a nominativized loc or abl. Similarly, the second part of the disjunction accounts for the corresponding clauses in which stat, if it is present, is not attached to a CS containing nom:

- (247)
- a. John sent Mary the book from Australia
  - b. John sent the book to Mary from Australia
  - c. John sold Mary the book
  - d. John sold the book to Mary
  - e. John robbed Mary of the book
  - f. John stole the book from Mary
  - g. His troops occupied the country
  - h. John sat on the floor
  - i. John reached London
  - j. John went to London
  - k. John left Canada
  - l. John went away from Canada
  - m. John destroyed the book

Notice too that part two will also allow for (248):

- (248) a. John was careful with the vase

in which stat is attached to erg. It also will provide the sequence of (249):

- (249)
- a. John worked
  - b. John was cautious

since this is not accounted for by the first part of the rule as formulated in (245), which requires that nom and erg be present as separate categories. As it stands, part two of the rule permits a certain indeterminacy, in that the relative sequence of two post-verbal noms (typically, the 'direct' and 'indirect' objects) is not specified. This could perhaps be remedied by adding loc or abl where necessary to the appropriate nom, or by framing sequencing constraints in terms of complexity of the CS containing nom, such that with non-pronominal

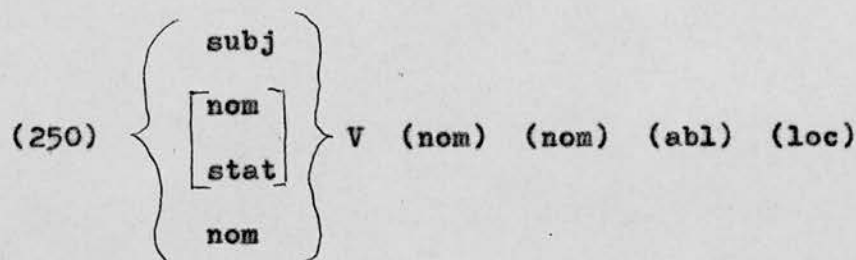


NPs in non-statives a CS containing nom and another case will normally precede a simple nom. Note however that we do find both sequences superficially in the case of (in particular) a pronominal nominativized locative phrase (I gave her it/I gave it her). It may be that the resolution of the indeterminacy should be left until later in the grammar.<sup>1</sup> Other post-verbal sequences show surface variation (The book was sold to Mary by John/The book was sold by John to Mary), but I suspect this too is rather more superficial, involving 'secondary word-order factors' (cf. Uhlířová, 1966). The sequencing rules envisaged here account for 'primary word-order' (principally subjectivization and objectivization). It is possible that such part combinations also should not be concatenated at this point but remain unordered until later.

We must now add to the disjunction in (245) further parts to allow for sequences not containing erg. I propose that the

1. Particularly in view of the relation between order and the character of the governed N. See further below, however. The restriction associated with pronominal objectivized locatives (I gave the woman the book/(?)I gave the woman it) and the grammaticality of I gave it him (as well as I gave him it) but not \*I gave the book the woman (or \*I gave the book him) can perhaps be accounted for with reference to a language-general principle favouring incorporation (as affix, proclitic or enclitic) into the verb of pronouns susceptible to subjectivization and objectivization.

three sub-parts in (250) be added to II. iii. 1 after those in (245) and in the order represented as follows:



The feature subj is, as we have noted, required to account for John knows the truth, John owes sixpence, etc. in which a

$\left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right]$  element is postposed. In addition to the variations

allowed for which were noted above ((240) to (243)), these permit the following, with nominative locative in a directional clause:

- (251) a. I am due a pound from you  
b. A pound is due me from you

or with nominative (a) or subjective (b) abl (if it is necessary to derive such in this way):

- (252) a. I am due a pound to you  
b. I owe a pound to you

or with subjectivized abl and objectivized loc:

- (253) a. I am due you a pound  
b. I owe you a pound

or with  $\left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right]$  (in a clause from the same paradigm):

- (254) A pound is due from me to you

One further convention required for the operation of such

rules is an order of precedence among the cases, such that if a CS contains, say, both erg and abl and is thus 'ambivalent' with respect to the sequencing operation, then it will occupy the position stated for erg rather than that for abl. Thus, in (247. c) and (247. d) John takes the erg position (as subject) rather than that for abl. Nom, erg and subj would appear to have precedence (in this sense) over loc and abl. Accordingly, in addition to the sequencing hierarchy embodied in the disjunctive ordering in (245) and (250) (or as revised in (255) etc. below), there exists a further hierarchical relationship between the cases with respect to the operation of these rules. This 'precedence' is perhaps better formulated, however, as a preference for 'grammaticalization' - i.e. for subject (pre-verbal) or object (immediately post-verbal) position rather than any other (where there is ambivalence); such would indeed provide for almost all the ambivalent instances I have noted, since CSs containing loc and abl are enabled to become subject or object only by also containing erg or nom or subj.<sup>1</sup> I am suggesting then that we substitute this set of sequencing rules ((245) followed by (250)) for rule II. iii. 1 as formulated in (244).<sup>2</sup>

1. However, this would not account for the sequence of The castle occupies the hill. This provides a further motivation for the modification I shall propose in what immediately follows.
2. It may be too that we should allow for such rules elsewhere in the grammar: note, in particular, that the relative sequence of N and some modifiers shows a variation associated with different transformational operations (the man with the beard/the bearded man).

Before looking at a further modification, let us consider a possible simplification. The similarity between the first part-rule in (245) and the second in (250) suggests that an amalgamation should be performed, provided that the first rule in (250) precedes the amalgamated rule:

$$(255) \text{ II. iii. 1. } \left\{ \begin{array}{c} \text{subj} \\ \left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right] \\ \text{erg} \\ \text{nom} \end{array} \right\} V \text{ (nom) (nom) (abl) (loc) (erg)}$$

Obviously, the introduction of such sequencing rules entails changes in II. ii, changes involving in particular the dropping of various specifications of right-hand side environments, since one of the main consequences of the new, rather more elaborate rule II. iii. 1 is to remove the necessity for such when categories (rather than features) are being introduced. I shall however not discuss these changes (or the modification to II. i required to allow for the distribution of nom and subj) at this point: they are fairly straightforward, and I intend anyway to consider now certain other modifications to these (and the rules in II. i) - modifications which will in their turn have consequences for our ultimate (for the moment) formulation of the sequencing rules. They are indeed such that (if these modifications are accepted) the precise character of the arguments I have advanced in the preceding would have to be altered somewhat: however, the



conclusion, I think, remains valid.<sup>1</sup> And I want now to turn to a further refinement which involves exactly the same kind of consideration. This provides for the elimination of subj.

In par. 5.2 I suggested that the alternation between by and to after know and the like, as in (256):

(256) The plan is known by/to lots of people

can be attributed to the presence vs. the absence of 'recategorization' of the loc as erg. We observed that, with dative verbs, such clauses alternate with one containing a subjectivized loc:

(257) Lots of people know the plan

in which the subjectivization of loc is associated (by the rules in (255)) with the addition of subj to the CS initiated by loc.

1. Many of the sequences we have attributed in the present chapter to nominativization will be accounted for with respect to ergativization in terms of the proposals made below. Thus, these at least would not fall any longer within the scope of the argument advanced above, and in particular would not pose the problem I have associated with rule (244). But recall that this rule is in itself problematical - even if we discount the nominativization of locatives. Just as there is a conflict between the 'neutral positions' for nom and loc and the formulation of a natural rule for nominativization, so we have found analogous problems in determining the underlying relative sequence of the categories nom and erg.

But the alternation between subject position and post-verbal position with by as a surface marker is what we have associated with the element erg. This suggests that we might substitute +ergative for +subjective, erg being added to loc as a result of the selection of +ergative. The sequence of the by variant in (256) will then be allowed for, as before, by the second part of (255). And we associate subjectivization of the loc in (257) with the presence of erg - but only if nom is not marked as stat. That is rule II. i. 4 in (139) would have to be modified by

eliminating the  $\left[ \begin{array}{c} \text{---} \\ +\text{stative} \end{array} \right]$  requirement: (256) is +stative, but (257) is not. We shall discover a further motivation for such a modification in the discussion which follows: it is necessary to allow for loc to be subjectivized in clauses subordinate to a causative verb, and therefore -stative. It is then possible to eliminate the first part of (255) and reformulate the rest as in (258):

$$(258) \left\{ \begin{array}{c} \left[ \begin{array}{c} \text{nom} \\ \text{stat} \end{array} \right] \\ \text{erg} \\ \text{nom} \end{array} \right\} V \text{ (nom) (nom) (V) (abl) (loc)}$$

where erg represents either the ergativization feature introduced as we have been discussing, or is a cover symbol for abl in a clause lacking loc (a convention which I anticipate will be useful elsewhere). This is intended to capture the generalization that loc in such a clause 'behaves' with respect to sequence as if it were erg. Such an account might also be extended to the 'ergativization' of nom noted in ch. 5 - in

examples like He was pleased by the book (as opposed to He was pleased with the book) and The book pleased him. In such clauses, nom would be ergativized and loc nominativized! Ergativization of nom would depend on nominativization of loc. This observation can be allowed for by making +ergative and +nominative simultaneously dependent on +locative. If both +ergative and +nominative are selected erg is added to nom and nom to loc; if +ergative and -nominative, erg is added to loc; if -ergative and +nominative, nom is added to loc. II. i. 4 can therefore be reformulated as in (259):

$$(259) \quad \text{II. i. 4} \quad +\text{locative} \rightarrow \left[ \begin{array}{l} +\text{ergative} / \left[ \begin{array}{l} \text{-----} \\ -\text{causative} \end{array} \right] \\ +\text{nominative} \\ +\text{directional} \end{array} \right]$$

However, such a modification has certain apparent drawbacks. In chapter 4 we associated the restriction on the distribution of 'progressive aspect' with the presence of stat (and absence of erg) in the clause. Under the proposed modification, a clause like (257) would no longer contain stat, and we would have to associate the 'progressive aspect' restriction with either +stative or ergativization.

Further, we find the ...by... form only with 'dative' verbs - cf.

(260) Two teachers are (included) in the committee

to which there corresponds no sentence with by, though there is one with subjectivized loc:

(261) The committee includes two teachers

If we associate the occurrence of (261) with ergativization of loc, then either this occurs only in the -stative instance ((261)) or it has no superficial marker in the case of the +stative ((260)). A reason for this lack of superficial indication of ergativization might be found in the fact that by is preempted by the corresponding causative:

(262) Two teachers were included (in the party) by the  
committee

One might wonder too whether the distinction between the form (in (260)) with segmented copula and that without such segmentation has anything to do with a difference between non-ergativization and ergativization. But apparently one must reckon either with the retention of +subjective with respect to examples like (261) or with a restriction of full ergativization to dative verbs. However, it may rather be that (261) and the like involve nominativization simply, the nominative CS that is also locative being preposed by some extension of the sequencing constraint for clauses containing more than one CS including nom discussed above with reference to indirect objects, whereby the more complex CS has first position. Such an extension would be in conflict with the sequencing constraint that subjectivizes the obligatory (i.e. simple, non-locational) nom when two are present and neither is marked with stat - as in The statue occupies a plinth. But the subject position of The statue can now be associated with ergativization: cf. the passive The plinth is occupied by a statue. We shall develop this notion below.

Observe too a verb like receive, which we associated in



par. 5.7 with subjectivized locative subjects. It shows once more that the  $\pm$ subjective (or now  $\pm$ ergative) opposition should be applicable in -stative as well as +stative clauses. But, if we do also associate the subjectivization of the locative category in such clauses with the attachment of erg to loc (i.e. with ergativization) rather than, say, nom to loc, then we must modify our formulation of the constraint on 'progressive

aspect', to exclude it from +stative and  $\left[ \begin{array}{l} -\text{directional} \\ +\text{ergative} \end{array} \right]$  (not all +ergative) clauses.

Let me try to summarise. We have allowed for the alternation between subject (if stat) and object position with certain NPs dependent on loc in terms of their subcategorization as nom: Fred was given the stuff by my father, My father gave Fred the stuff. Other (underlyingly locative) NPs alternate between subject position and a post-verbal position with by as a marker, and thus display ergativization: The fuzz know that, That is known by the fuzz. If the locative is nominativized then the nom may be ergativized, as in A brothel now occupies that spot, That spot is now occupied by a brothel. We have formulated a sequencing constraint (in (258)) which will predict these sequential arrangements, and the others we have looked already, in terms of what case elements are present. Loc and abl become subject only via subcategorization as nom or erg. Associated with the constraint is the convention that erg and nom take precedence over loc and abl (where present in the same CS); or, more generally, subject or object position is preferred to the others. Finally, (other things being equal) a

complex nom comes before a less complex: That store contains the boxes, My father gave Fred the stuff.

Dougherty (1970) argues that such distributions for loc (and dative) and nom (Fillmore's objective) as we have surveyed show the necessity for a level of deep structure (at which the phrases I have described as ergativized are (deep) subject and the nominativized (in transitive clauses) are (deep) objects) and a passive transformation (to account for the +stative possibilities.<sup>7</sup>) My discussion has at least shown that this conclusion is fallacious. Further, Dougherty provides no explanation of the restriction on ergativized noms that we have accounted for, or any proposal for the (non-ergativized, non-nominativized) remainder of the paradigms concerned. The same considerations apply to the analogous discussion by S. R. Anderson (1971).

Notice finally that have behaves like contain in this respect, i.e. it is a verb with nominativized loc as subject. This means that the second explanation for the ('possessive'/'non-possessive') ambiguity of have proposed in par. 5.3, in terms of dative locative vs. simple locative must now be abandoned, since have, unlike true dative verbs, does not usually ergativize. We must therefore fall back on the first proposal (cf. (172, 173)), or admit that have is simply indifferent to the distinction. I shall assume the latter, in the absence, to my knowledge, of positive evidence to the contrary.

The various modifications are incorporated in the revised set of rules presented in (263):

(263)

II. 1. 1. V  $\rightarrow$   $\begin{bmatrix} \pm\text{ergative} \\ \pm\text{stative} \\ \pm\text{locative} \end{bmatrix}$

2. a. +locative  $\rightarrow$   $\begin{bmatrix} \pm\text{directional} \\ \pm\text{nominative} \end{bmatrix}$

b. +ergative  $\rightarrow$   $\pm\text{causative}$

3.  $\begin{Bmatrix} +\text{ergative} \\ +\text{directional} \end{Bmatrix} \rightarrow \pm\text{reflexive}$

4. -reflexive  $\rightarrow$   $\begin{bmatrix} \pm\text{oblique} / \begin{bmatrix} \text{---} \\ +\text{stative} \end{bmatrix} \\ \pm\text{ablative-nominative} / \begin{bmatrix} \text{---} \\ +\text{directional} \\ +\text{nominative} \end{bmatrix} \end{bmatrix}$

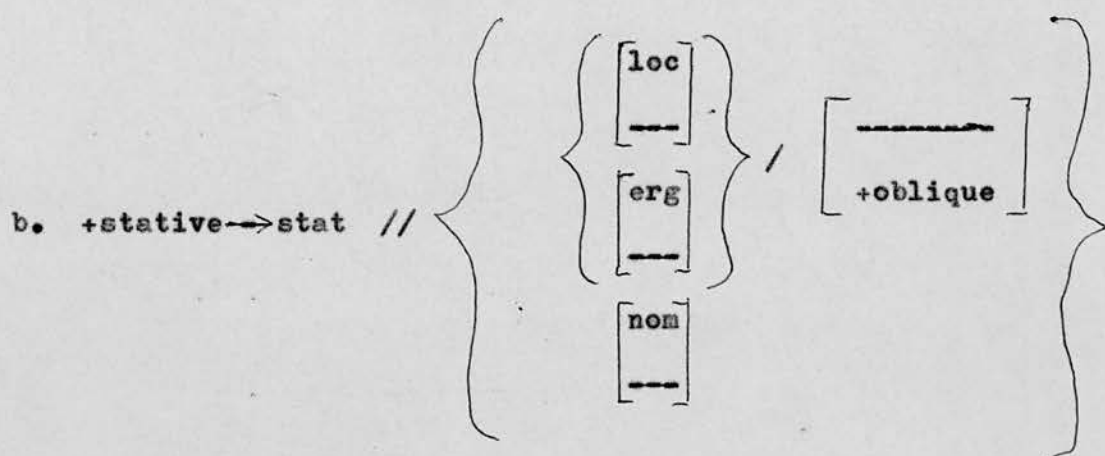
ii. 1. a. V  $\rightarrow$  nom

b. +locative  $\rightarrow$  loc

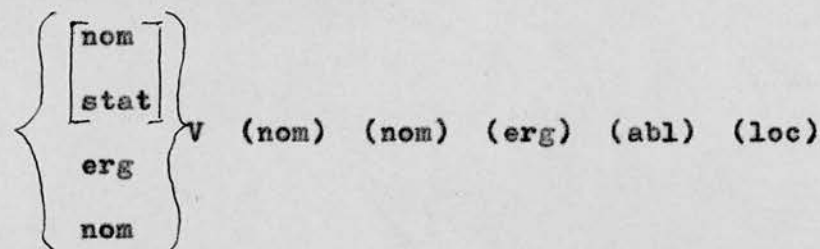
2. +directional  $\rightarrow$  abl //  $\left\{ \begin{bmatrix} \text{loc} \\ \text{---} \end{bmatrix} / \begin{bmatrix} \text{---} \\ +\text{reflexive} \end{bmatrix} \right\}$

3. +ergative  $\rightarrow$  erg //  $\left\{ \begin{bmatrix} \text{nom} \\ \text{---} \end{bmatrix} / \begin{Bmatrix} \text{---} \\ +\text{reflexive} \\ +\text{nominative} \end{Bmatrix} \right\}$   
 $\left\{ \begin{bmatrix} \text{loc} \\ \text{---} \end{bmatrix} / \begin{bmatrix} \text{---} \\ +\text{locative} \\ -\text{causative} \end{bmatrix} \right\}$

4. a. +nominative  $\rightarrow$  nom //  $\left\{ \begin{bmatrix} \text{abl} \\ \text{---} \end{bmatrix} / \begin{bmatrix} \text{---} \\ +\text{ablative-nominative} \end{bmatrix} \right\}$   
 $\left\{ \begin{bmatrix} \text{loc} \\ \text{---} \end{bmatrix} \right\}$



iii. sequencing constraint



+locative is now simultaneous (in II. i. 1) with +ergative: if

$\left[ \begin{array}{c} +\text{ergative} \\ +\text{locative} \\ -\text{causative} \end{array} \right]$  is selected, then erg will appear as a feature

on loc or nom, by II. ii. 3. Further, it is only if the clause is also -locative (or +causative) that we can associate with +ergative those 'agentive' characteristics (imperativization etc.) we observed in ch. 2. Thus 'agency' depends on a conjunction of semantic properties rather than simply a feature like +ergative. As a consequence, erg can be attached to nom in two rather different circumstances. If the clause is -locative but +ergative and if +reflexive is selected, then we get an intransitive agentive like John worked. If, on the other hand, the clause is +locative and +nominative, and +ergative is selected, then the loc will have nom attached and the nom erg, as in A statue occupies the plinth/The plinth is occupied by a statue. In this latter instance there is no agency involved.



I have also allowed for the attachment of abl to loc and erg to nom in terms of a single distinction, +reflexive. Thus, we must allow for it to be possible for +reflexive, for instance, to be selected twice, by II. i. 3 -- if the clause is both +ergative and +directional. This also means that II. ii must be constrained in such a way that the +reflexive in II. ii. 2 is not the same as that in II. ii. 3. If, under II. i. 3, only one +reflexive is selected, and this is referred to in the operation of ii. 1. 2, then it is not available at the time of operation of II. ii. 3. A clause with a directional reflexive is The marble rolled across the room; one with an ergative reflexive is once again John worked; and with both, John walked across the room.

These various complexities provide one kind of motivation for a modification to the analysis of causatives we must now elaborate.

## 6.2. Transitivity and direction

We argued in par. 4.9 that abl can be 'reflexive' to loc in the way that erg is sometimes reflexive to nom and we embodied this observation in the rules in (263). This means that, if we restrict our attention to the distribution of abl with respect to loc and erg to nom, it appears that both loc and nom can have a further case element attached to them, a case element which can appear elsewhere as a separate category, and that they can also appear without their respective further element being present, either as category or feature. If we thus abstract the instances in which the 'local' and the 'non-local' case elements appear in the same CS, then there is a quite

striking parallelism between the co-occurrence possibilities for the 'non-local' and 'local' cases, respectively: the distribution of abl with respect to loc is analogous to that for erg in relation to nom. The possible combinations of erg and nom and abl and loc are represented schematically in (respectively) (264. 1) and (264. 2):

(264)	1. a. nom	b. nom erg	c. $\begin{bmatrix} \text{nom} \\ \text{erg} \end{bmatrix}$
	2. a. loc	b. loc abl	c. $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$

That is, nom and loc either appear alone (as in a) or together with erg and abl either as a separate category (as in b) or as a feature in the CS initiated by nom or loc (as in c). 'Transitivity' and 'direction' show the same range of possibilities. They are also, I contend, semantically parallel. Thus, I am going to suggest that it would be advantageous if we could incorporate such a generalization into our rules. In particular, we should be able to show that the rules in II. i involving  $\pm$ ergative and  $\pm$ directional are in some significant sense instances of the same rule, the latter merely being dependent on the selection of  $\pm$ locative; the distinction is one between locative and non-locative 'direction' or 'transitivity'. Similarly the difference between the b and c combinations in (264) should in both instances be related (as anticipated in (263)) to the operation of a rule involving 'reflexive'.

Notice that a parallelism between erg and abl is reflected within various languages in the fact that the two categories can be represented superficially in the same way: consider a(b) in

Latin (a quo loco, caedetur ab aliquo) or fram and of in Old English (Green, 1914: 520-1) or hača in Avestan (Green, 1914: 517-18) or German von (Schuchardt, 1922: 244-6; Green, 1914: 537-9) or མོ/གོ in the Amdowa dialect of Tibetan (Roerich, 1958: 31-3) or Gothic us (Green, 1914: 544-5), etc. Compare too Uhlenbeck's suggestions (1916a: 196-7) concerning the Indo-European nominative and ablative. And one can discern that there is a 'semantic element' in common: if we try to formulate this in a rough way, we can say that the addition of erg and abl to nom and loc (respectively) introduces 'directionality',<sup>1</sup> with erg and abl indicating initial points and nom and loc terminal. Erg and abl are 'sources' - abl commonly spatial (or temporal); erg causal with causatives, and in general 'the source of the action'. Nom and loc in the presence of erg and abl (respectively) indicate 'goals' (of an 'action' or a 'movement'). Thus, with respect to these latter 'goal' cases, it is not surprising that in some languages (as we noted in chapter 1) we find a case-inflexion which can mark (superficially) both the object 'goal' of a transitive verb and the 'goal' of a movement; cf. the Latin accusatives in Hostem occidit and Roman eo.<sup>2</sup> It might be

1. Cf. Hjelmslev's (1935: 128) first dimension of 'direction'; the term 'transitive' itself involves a spatial metaphor. Markers associated with abl also often introduce non-animate (and particularly 'abstract') 'causes' even where abl and erg have quite distinct realizations - cf. English He died from exhaustion.

2. See Meillet & Vendryes, 1924: 500-4; Kurylowicz, 1964: 182. For references to a number of discussions of such



that such is merely a reflexion of the nominativization of loc discussed above - though the particular susceptibility of loc to this is perhaps in itself significant. The nominative and locative are in the absence of erg and abl (respectively) non-'directional' (cf. Hjelmslev, 1935). It might be argued that the distinction between nom and loc themselves has to do with the obligatory character of nom (cf. Jakobson's (1936) distinction between 'marginal' ('Randkasus') and 'non-marginal' cases). However, before pursuing this relationship further, I want to consider in more detail how we might incorporate the generalization concerning 'transitivity' and 'direction' into our grammar.

With regard to this, a restriction which we have observed (in par. 4.1) with regard to the distribution of loc (and of predicative nom - cf. par. 3.4) is very pertinent. We noted in these places that loc (and predicative nom) co-occurs (in the same clause) with erg only if the clause is causative. Thus, we find (to take directional examples) either (265. a) (non-ergative) or (265. b) (causative):

(265) a. The ball rolled across the floor

b. Egbert rolled the ball across the floor

21 If it were not for the causative examples, we could formulate a generalization that erg and loc were mutually exclusive. Such

... phenomena with respect to the Indo-European languages, particularly Sanskrit, see Gonda 1957; compare too Schuchardt, 1922: 244-6. This inflexion is also often

found in such languages representing  $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$  - 'accusative of extent' (Meillet & Vendryes, 1924: 504-5; Kurylowicz, 1964: 82).



If it were not for the causative examples, we could formulate a generalization that erg and loc were mutually exclusive. Such a generalization becomes possible if we consider causatives to involve superordination: in this case, the ergative would appear in the superordinate clause, the locative in the subordinate. Thus, clauses containing loc could not also include erg as an element.

It is true that this particular anomaly is also avoided if we adopt the formulation proposed in (263), such that erg can occur in a  $\begin{bmatrix} +\text{locative} \\ -\text{causative} \end{bmatrix}$  clause, but only as a feature on

loc. However, this now means that the semantic interpretation is rather complex: erg betokens agency if either the clause is -locative or if it is +causative. In  $\begin{bmatrix} \text{?locative} \\ -\text{causative} \end{bmatrix}$  clauses the

presence of erg does not introduce agency, but rather allows for the appropriate distribution and representation for loc in active and passive sentences. Thus, there are still motivations within such a proposal for the elimination of loc from causative sentences.

Now, consider this restriction in the distribution (or interpretation, in terms of (263)) of erg in relation to the affinity I have suggested for abl and erg. In terms of such an account as I have just suggested not only loc but also and more particularly abl will not appear in the same clause as erg. Elsewhere, I proposed that we provide for the erg/abl relation and for the restriction on the co-occurrence of erg and locative cases by, in the first place, adopting the superordination account

of causatives, and secondly, regarding erg as being equal to abl in the absence of loc. See Anderson, 1971c: ch. 11.

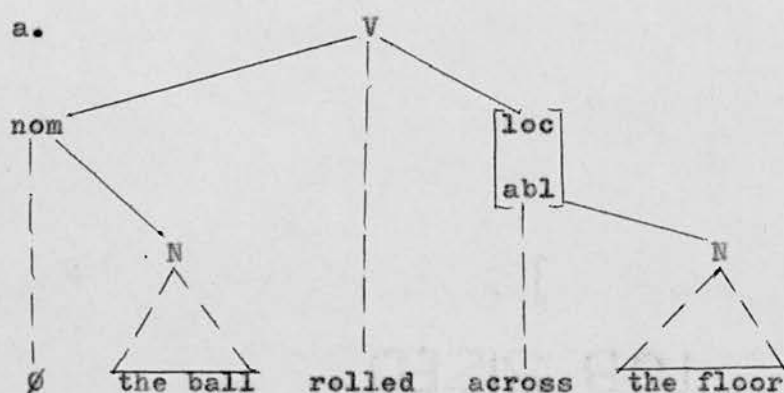
That is, instead of regarding  $\pm$ directional (a positive selection of which introduces abl) as dependent on  $\pm$ locative, I suggested that  $\pm$ locative and  $\pm$ directional be made simultaneous, and that  $\pm$ ergative be eliminated - the former erg being interpreted as abl in a clause which does not also contain loc:

$$(266) \text{ II. i. 1. } V \rightarrow \begin{bmatrix} \pm\text{locative} \\ \pm\text{directional} \\ \pm\text{stative} \end{bmatrix}$$

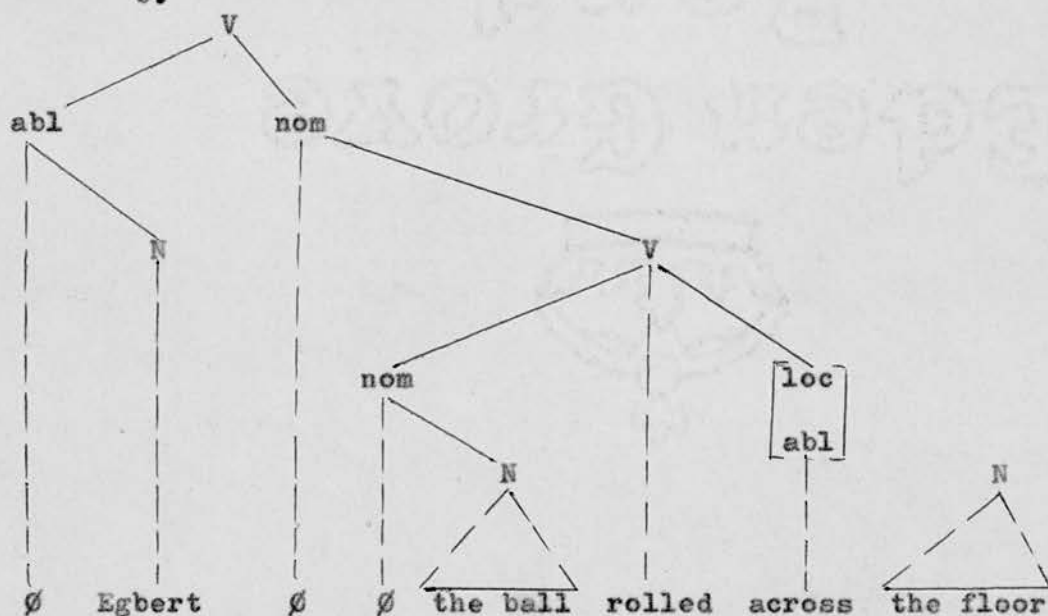
(Let us ignore  $\pm$ stative for the moment.) If  $\begin{bmatrix} +\text{locative} \\ -\text{directional} \end{bmatrix}$  is selected, then a clause like A statue stands on the plinth is the result. The selection of  $\begin{bmatrix} +\text{locative} \\ +\text{directional} \end{bmatrix}$  is associated with a clause like (265. a). A clause like John read the book (which under our previous interpretation involves the selection of  $\pm$ ergative) is now derived via the co-selection of  $\pm$ directional and  $\pm$ locative: the former  $\pm$ ergative corresponds to the selection of  $\pm$ directional when  $\pm$ locative is not simultaneously chosen.

Egbert sneezed is straightforwardly  $\begin{bmatrix} -\text{locative} \\ -\text{directional} \end{bmatrix}$ . Causative sentences can then be interpreted as involving the subordination of one of these types of clause to a clause of the  $\begin{bmatrix} -\text{locative} \\ +\text{directional} \end{bmatrix}$  ('ergative') type. Thus, the structures underlying (265. a) and (265. b) might be represented (as a first approximation) as in (267. a) and (267. b) respectively:

(267) a.



b.



A representation for (267. b) closer to the surface is derived via a rule which subjoins the lower V and the nom governing it to the upper V. This derived representation corresponds with the initial representation for causatives we have assumed up to this point.

However, it is clear that such a proposal brings with it a number of drawbacks. Notice firstly that it becomes very difficult, in terms of such an identification of abl with erg, to keep track (in the course of a derivation) of what kind of abl is involved. In Anderson 1971c, certain 'cover-symbols'

were introduced to remedy this. But the status of these is very dubious, and a very complex interpretation of them would be required if we are to accommodate as well as this identification phenomena like the ergativization of loc or nom or the nominativization of abl or loc. Moreover, the similarities between loc and nom remain unaccounted for. If we once more propose identification as an explanation, the tracking problems become even more immense: we reduce the number of functional categories at the cost of the complications of 'cover-symbols' and their interpretations. All this seems to suggest that the four basic categories are not to be collapsed in this way. How then do we allow for the similarities we have observed?

These can indeed be accounted for if we abandon one assumption concerning the elements nom, loc, etc. that we have tacitly maintained throughout our discussion. This is their atomic status. Suppose rather we regard nom, loc, etc. as themselves 'cover-symbols' for complexes of features. Then we can allow for the proportions  $\text{erg} : \text{nom} :: \text{abl} : \text{loc}$  and  $\text{erg} : \text{abl} :: \text{nom} : \text{loc}$  in terms of the composition of the functional segments, as presented in (268):

(268)

	nom	erg	loc	abl
locative	-	-	+	+
negative	-	+	-	+

negative is the 'inherent' negation that also distinguishes antonyms. Notice that such an analysis appears to be more or less directly reflected in the case suffixes of Tibetan as



described by Grierson (1909: 26-7). Thus, the nominative N,  $\begin{bmatrix} -\text{loc} \\ -\text{neg} \end{bmatrix}$ , has no suffix superficially; the ergative,  $\begin{bmatrix} -\text{loc} \\ +\text{neg} \end{bmatrix}$ , has -s; the locative,  $\begin{bmatrix} +\text{loc} \\ -\text{neg} \end{bmatrix}$ , has -na; and the ablative, which is +loc like the locative, and +neg like the ergative, has -na-s.

If we adopt this analysis, but maintain the use of nom, loc, etc. as 'cover-symbols' in rules like those in (263), then +causative can be eliminated from the rules: rule II. i. 2. b can be omitted, and the -causative restriction in II. ii. 3 may be removed. Causatives simply involve the subordination of certain kind of clauses to a (non-locative) ergative clause.

We must now examine the nature of this embedding, and what restrictions are placed on the lower clause. For this purpose, it is convenient to return to the superficially complex causative structures we noted in par. 3.1.

### 6.3. The structure of causatives

In par. 3.1 we allowed for causative sentences like those reproduced in (269):

- (269) a. Egbert made them leave  
 b. Egbert allowed them to leave  
 c. Egbert prevented them from leaving

as containing a 'sentential' nominative. This seems just, and indeed accords well with the preliminary characterization of causatives in general that we have just formulated. However, various questions must now be resolved if we are to pursue further

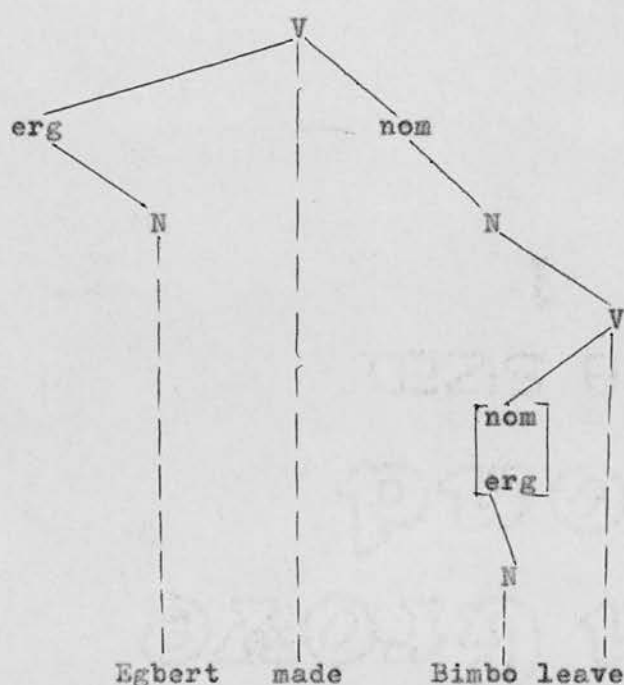
our analysis of causatives. Firstly, notice that superficially it is the 'subject' of the lower sentence rather than the whole sentence that 'behaves' like the object of the causative - - e.g. in terms of its morphology (no preposition, accusative inflexion), and its susceptibility to passivization (cf. e.g. Kiparsky & Staal, 1969: par. II):

(270) Egbert was allowed to leave

In the second place, it remains to allow for the variation displayed in (269) between make + no preposition, allow + to, and prevent + from + ...-ing. We shall see that the resolution of these problems is connected.

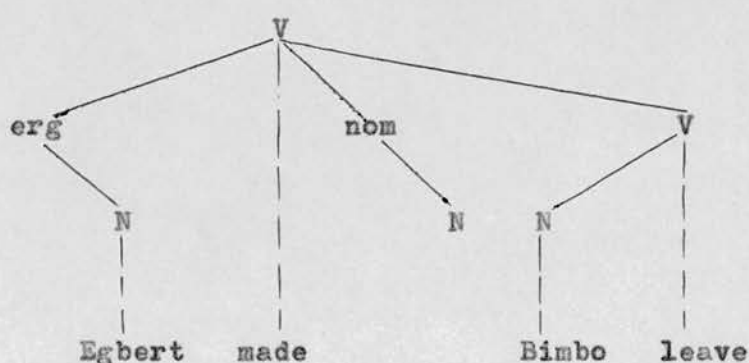
Our first observation suggests that some rule raising the 'subject' of the lower sentence into the upper one is involved (cf. Lakoff, 1965). This operation is required elsewhere (and has been widely discussed in varying formulations and under various names (Rosenbaum, 1967b; Kiparsky & Kiparsky, 1970; McCawley, 1970; etc.)); and we shall discover below that it is an instance of a more general principle. I propose the following derivation. Underlying Egbert made Bimbo leave is the structure abbreviated in (271):

(271)



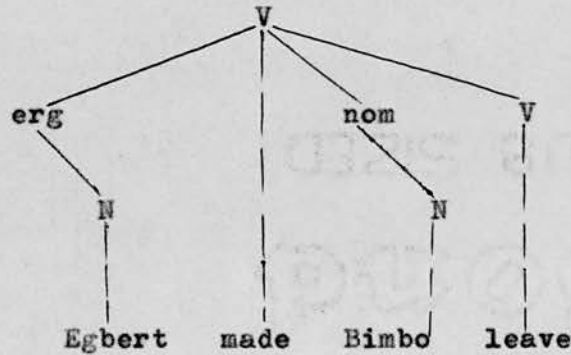
The nominative N in the causative clause is semantically empty; it is specified only as 'N'. (We shall arrive at a more careful characterization of the notion of 'empty N' in ch. 8.) Notice that the lexical items appear in (271) etc. only for the sake of clarity of exposition. There is no reason to suppose that these processes are post-lexical; indeed, quite the contrary, as we shall find below. I presume that on the first cycle the subject node in the lower sentence is deleted. We move on to the upper V. By a process of adjunction (cf. Anderson, forthcoming a, b) the lower V is moved out immediately to the right of its governing N and adjoined to the upper V, as in (272):

(272)



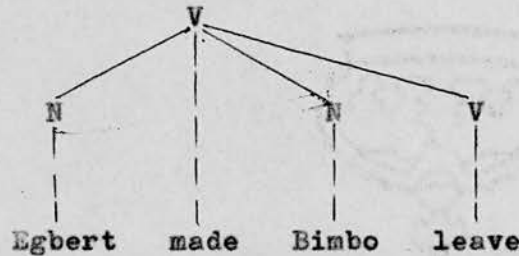
This apparently 'frees' the empty nominative N for the lower subject phrase to be copied on to it, accompanied by deletion of the original:

(273)



By pruning of the subject and object nodes, we get (274):

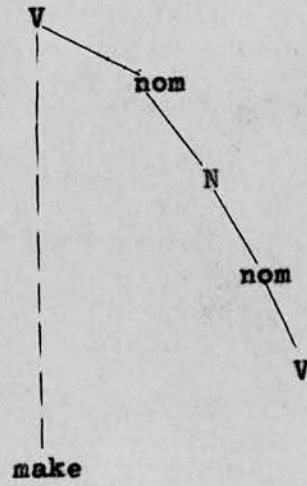
(274)



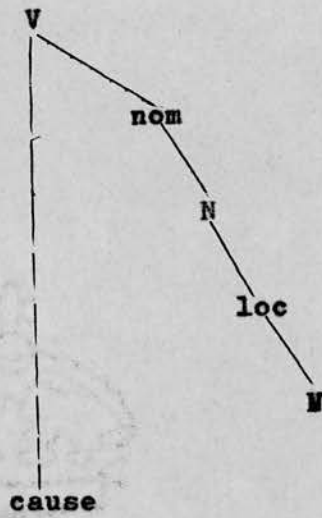
Consider now however the fact that the lower V after allow etc. and prevent etc. is marked by to and from, respectively. What do they manifest, where do they come from? A transformational source is undesirable, since they are semantically distinct - though one could attribute this solely to the character of the upper V. Moreover, the formal status of such a rule (which involves transformational introduction of non-lexical material) would be very doubtful within the framework we have adopted. What I suggest is that make, cause and prevent, say, differ in the adnominal cases they require to immediately govern the lower V, as illustrated in (275):



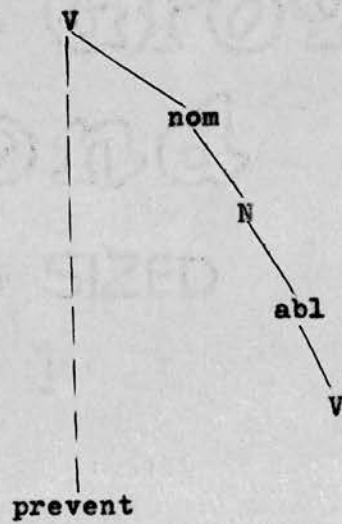
(275) a.



b.



c.



After abjunction, this originally adnominal case comes to be

immediately governed by the upper V. The loc is realized as to, the abl as from, and the nom (in (a)) is pruned by the object - forming rules - - thus accounting for the absence of a preposition after make (in active sentences).<sup>1</sup>

The suggestion of three underlying adnominal cases is not entirely ad hoc. There are independent motivations for these, as we shall find in the two following chapters: firstly with respect to the representations appropriate to certain aspectual distinctions, and then in connexion with a discussion of the ways in which Ns can be dependent on Vs (without intervening V).

The semantic distinction associated with the adnominal ablative vs. locative is clear, and correlates in an intuitively obvious way with the polarity distinction we hypothesized as distinguishing them. Loc (and nom), as opposed to abl, are -neg. As to the loc/nom distinction, this seems to have to do with 'directness of causation', the structure involving loc being less direct. Compare the examples in (276):

- (276) 1. a. His arrogance caused me to resign  
          b. His arrogance made me resign  
      2. a. He caused me to resign  
          b. He made me resign

The (a) example in (276. 1) seems to me to be rather more natural,

1. Notice that in passives, however, to appears: Bimbo was made to leave. I am not sure what to make of this. Cf. let: I let him go,? He was let go, \*He was let to go. This also does not account for the possible absence of from after prevent, stop, etc. This may be due to analogy with the genitive + gerund pattern (in which 'raising' does not occur). Cf. I prevented him coming, I prevented his coming.

in that the 'ultimate agent' (he) is only indirectly involved, and this is consonant with the interpretation I have suggested for cause ... to. In (276. 2), only in the (b) example is the agent he necessarily immediately involved in the final causation; in (276. 2. a), it may be some distinct, unspecified action of the agent that brings about my resignation.<sup>1</sup>

1. This distinction appears to correlate with the number of temporal references that can be associated with a particular causative structure. Fodor (1970: 433), for instance, suggests that the following sentence, involving an 'indirect causative', is acceptable: John caused Bill to die on Sunday by stabbing him on Saturday. If made is substituted for caused ... to, the sentence becomes anomalous. Since this is so (in my dialect and that of a number of informants, at least), Fodor's argument that the acceptability of the cause ... to die and the unacceptability of a parallel kill instance constitute evidence that kill is necessarily a deep structure simple verb is totally destroyed. (As another kind of non-example which shows that this restriction has little to do with whether two surface verbs are present or not, consider \*He began to move house on Wednesday by packing on Tuesday.) Since one of his two other arguments involves an anomalous interpretation of John caused Bill to die by swallowing his tongue (cf. \*Bill died by swallowing his tongue, where by = 'by means of'), his case cannot be regarded as carried. Indeed, since the final argument, involving differences between melt ...



Most superficially simple (i.e. lexical) causatives in English seem to involve 'direct' causation (though the qualify instance noted by Fodor (1970: 433, fn. 5) may constitute an exception), and we shall adopt such an analysis in the discussion of certain lexical causatives that follows. However, notice that in Carib (Hoff, 1968: pars. 3.1.3.1.6-7), for instance, there is apparently a morphological distinction (-nopp<sup>2</sup> vs. -nopo) made between 'direct' and 'indirect' (superficially simple) causatives.

We noted in par. 3.1 various restrictions in the distribution of make (as illustrated in (81) - (83)), such that while it seems to be freely available above verbs with ergative subject (whether transitive or intransitive), there are apparently rather idiosyncratic restrictions on its appearance above verbs with simple nominatives as subject. Cf.:

... and kill, can be allowed for even within the position he opposes by allowing the '"loosening" of the conditions of reference of pro-forms' he himself proposes, all that can be said to be demonstrated by his discussion is that the positive arguments for a complex origin for kill and transitive melt originally offered by Lakoff (1965) are inconclusive. But so too are Fodor's arguments against such a source. Certainly, kill is not derived from 'cause to die', for cause is an 'indirect' causative, and kill is 'direct'.

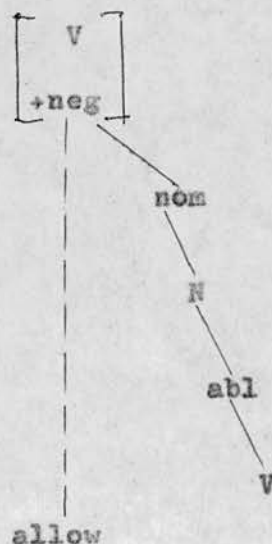


- (277) a. He made John fall  
b. \*He made John die

Now if both lexical causatives and make involve 'direct causation' we would expect make to turn up where there is no lexical causative available. This is the case with most ergative-subject Vs, and with fall (fell is now much more restricted -- as is frequently true of (particularly) morphologically derived causatives). However, corresponding to die there is kill; and (277. b) is excluded. It is, in fact, not as clearcut as this, in that there are a number of verbs with lexical causative equivalents which also take make (as melt, make ... melt). But I think that the restrictions on make rather than, say, cause make more sense if make is more closely related to lexical causatives than cause etc.

There is a subset of (non-lexical) causatives whose derivation provides some problems for the kind of analysis I have been proposing, as represented in (275). Consider verbs like allow or permit. Semantically these are antonymic to prevent, and the structure abbreviated in (278) is appropriate:

(278)



i.e. as for prevent but with the upper V negative. But superficially we do not find the marker of abl we would expect, nor is the form of the verb gerundive. Cf.:

- (279) a. I didn't prevent George from coming  
b. I allowed George to come

Consider too let, which doesn't show any marker at all: I let George come. I am uncertain how one should account for this.

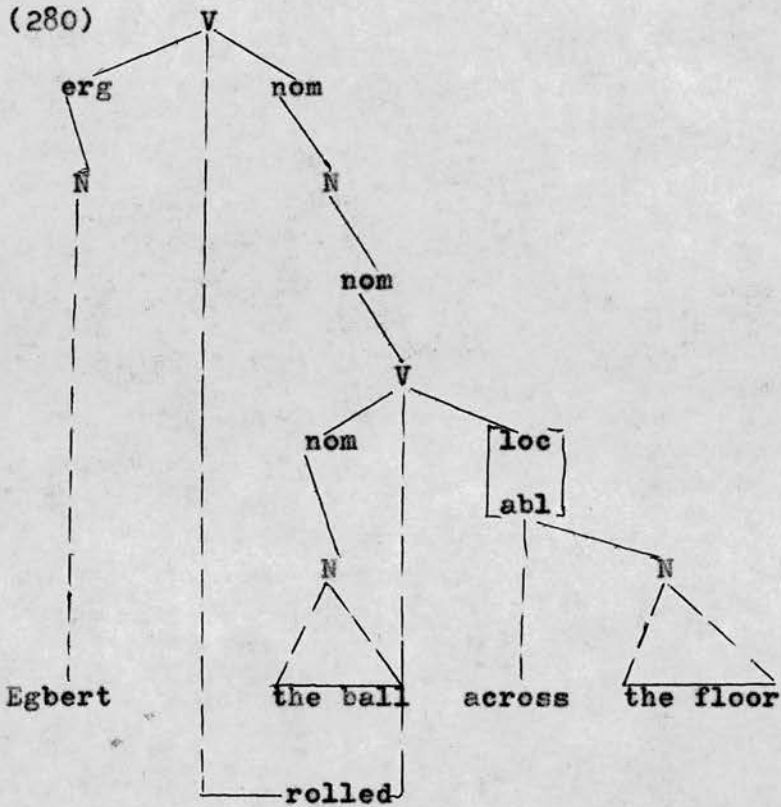
It may be that in the presence of the two negative elements

(abl =  $\begin{bmatrix} +loc \\ +neg \end{bmatrix}$ ) the polarity of the case elements is switched - -

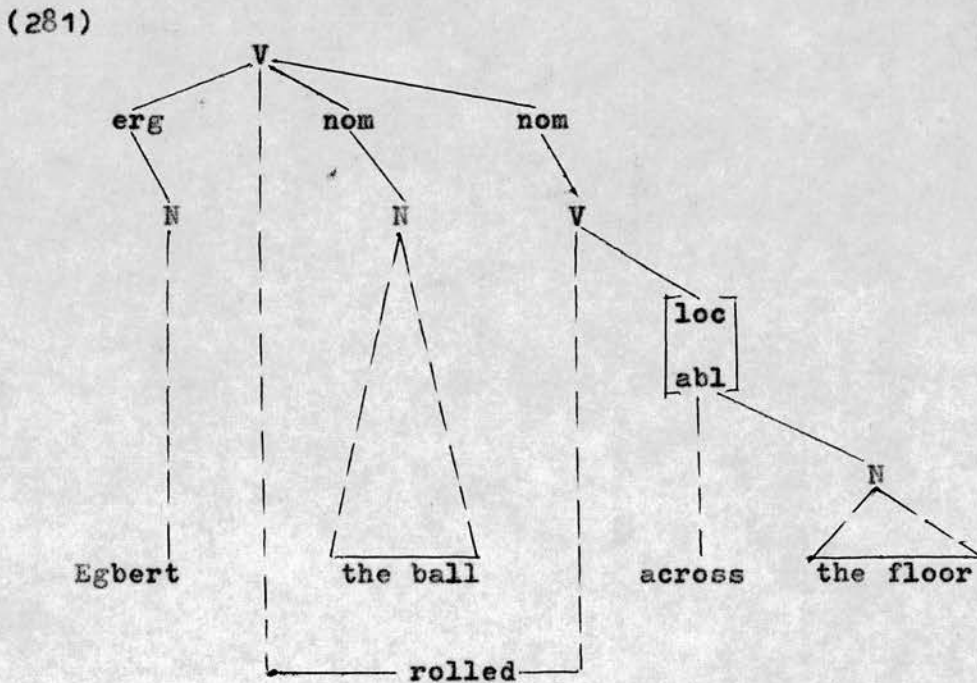
though all such a formulation does is state the problem. And, with let, both features of abl have to be switched. We encounter the same phenomenon in the derivation of the continuative Aktionsart (with continue), as noted in ch. 7. But there a principled explanation is ~~no~~ more obvious.

#### 6.4. 'Lexical' causatives

Let us review now the consequences of these proposals for the derivation of lexical causatives. Underlying, for instance, (265. b) we are now suggesting the kind of structure in (280) rather than that in (267. b):

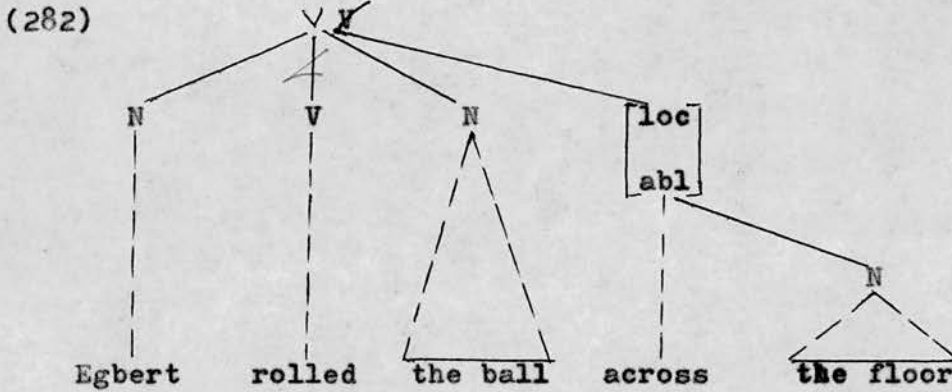


(i.e. erg is substituted for the upper abl in (267. b), and a nom - N configuration intervenes between the two Vs). Given this representation, the same derivation as was outlined for (271) is applicable. Thus, after pruning in the lower clause, abjunction and 'raising', we have:



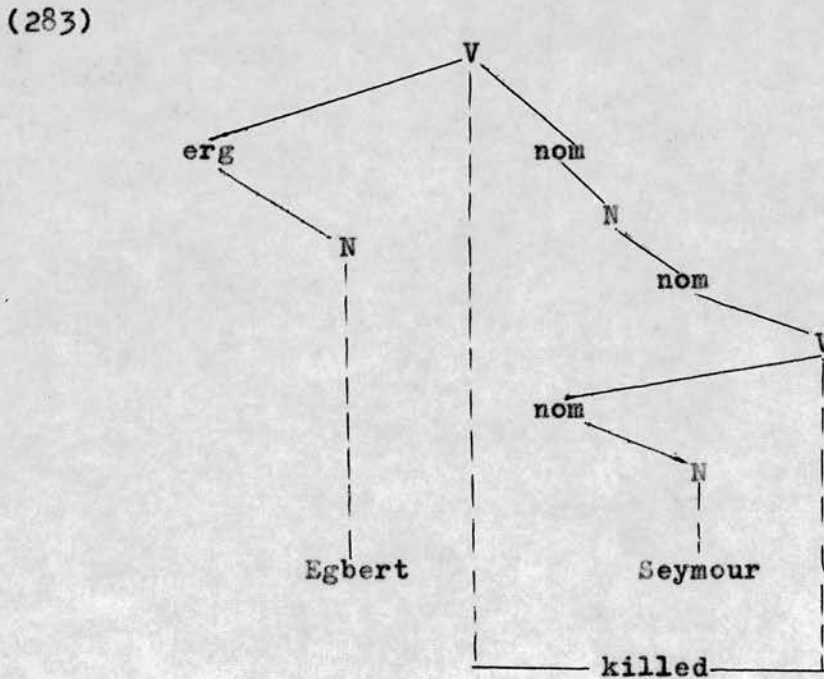


However, as well as pruning in the upper clause, in this instance there also occurs subjunction of the lower V to the upper, resulting in (282):



(This assumes that under subjunction any dependent of the subjoined element is readjoined to the governing category, in this case the upper V.)

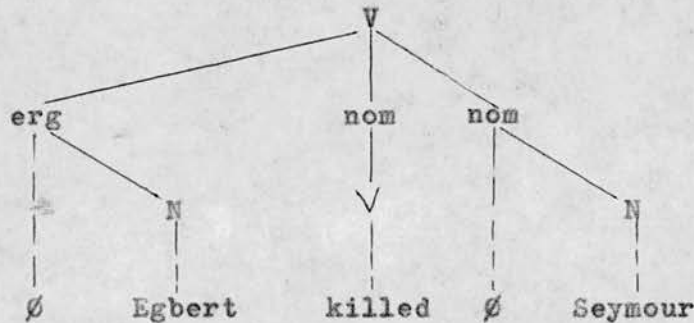
With a simple loc in the subordinate clause, we have clauses like He stood it on the table, which differ from (280) only in lacking abl in the subordinate clause. A subordinate clause with a simple nominative is illustrated in (283):





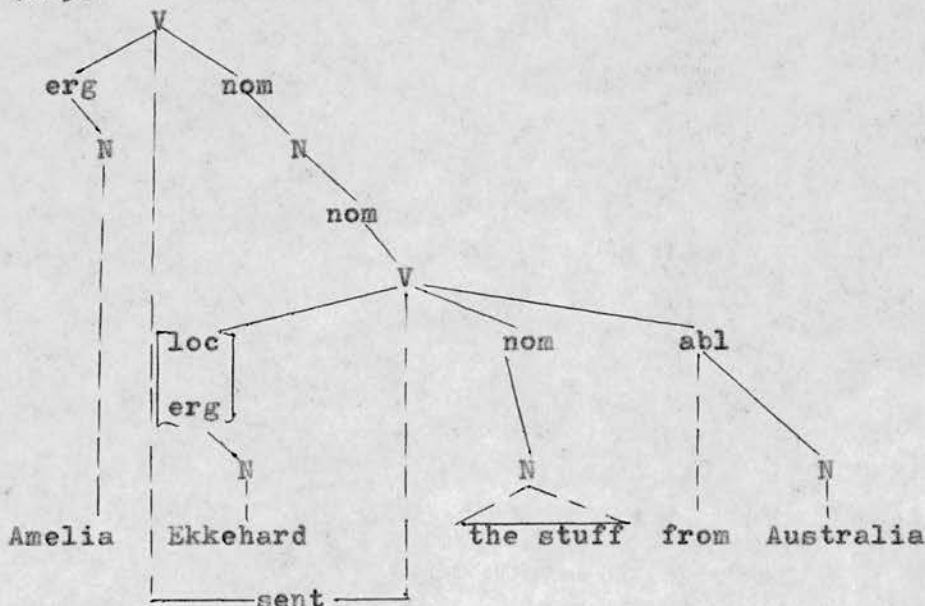
though die (like its euphemistic equivalents - pass away, etc.) may in fact be a directional verb (just as live is locative - cf. too come alive, come into the world).<sup>1</sup> After, subjunction, we get (284):

(284)



Causatives like Amelia sent Ekkehard the stuff from Australia can be allowed for in terms of a structure like that in (280), except that in the lower clause abl is not reflexive to loc and loc is subjectivized, as indicated in (285):

(285)

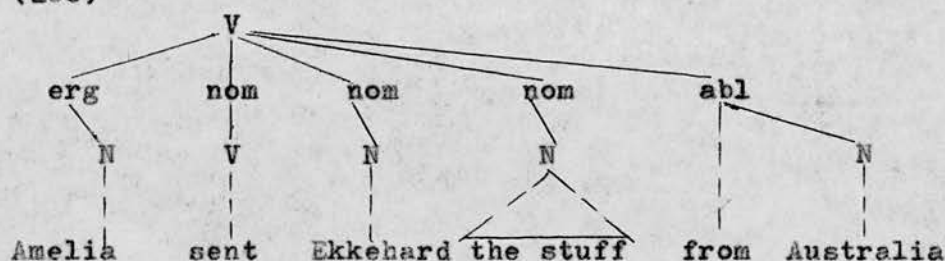


I assume that sequencing applies first on each cycle. Again, abjunction reattaches the lower V, and the lower subject is

1. Cf. too go to sleep, be asleep, be awake.

copied into the empty nom position, resulting after subjunction in (286):

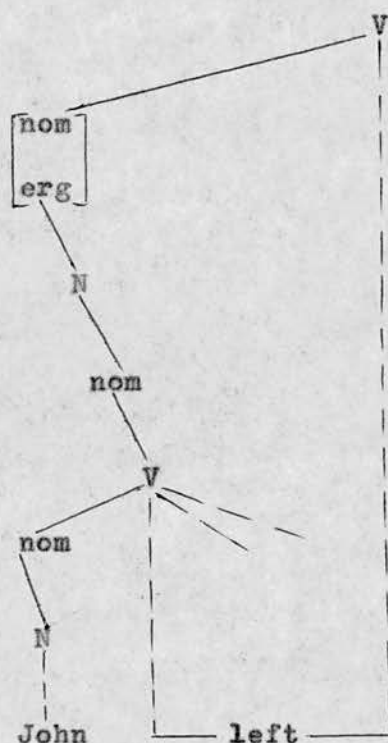
(286)



Subject/object/complement pruning will remove all the erg and nom nodes. We shall find that buy/sell etc. involve similar structures (with loc or abl as subject), but with one important distinction, which because it involves a principle of some consequence has made it preferable to place discussion of such sentences in a separate section (following the present one).

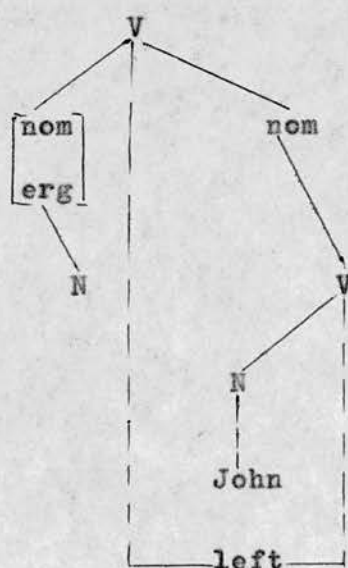
Causatives with reflexive object involve underlyingly a lower V with a subject identical in reference to the higher subject; when the lower subject is raised into object position in the upper sentence, the conditions for reflexivization (cf. e.g. Postal, 1970) are met. In this way are derived John killed himself or John moved himself. This brings us once again to the problem of accounting for 'intransitive' or 'reflexive causatives' (cf. par. 3.2) like John moved or John left. Must one suppose a similar underlying structure in their case, but with deletion of the co-referential object? Again, this is perhaps appropriate for wash and the like, but is inappropriate more generally (cf. again par. 3.2). Rather we can suggest the following derivation, originating with (285):

(285)



i.e. the lower V is still subordinated to an empty nominative N in the upper clause, but in this instance the nom is also erg - - the causative clause is a reflexive ergative. After abjunction we find (286):

(286)

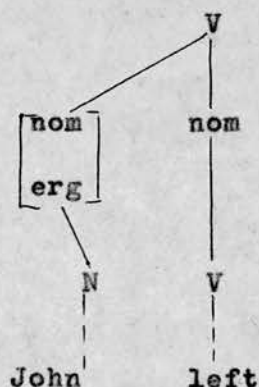


Once more the lower V is moved immediately to the right of the N which governed it - - if we discount the upper V: placement



of the abjoined configuration before this V would result in a violation of the sequencing constraints. At this point, as before, the lower subject is copied on to the empty upper nominative N and the original deleted. We thus produce (287) by subjunction:

(287)

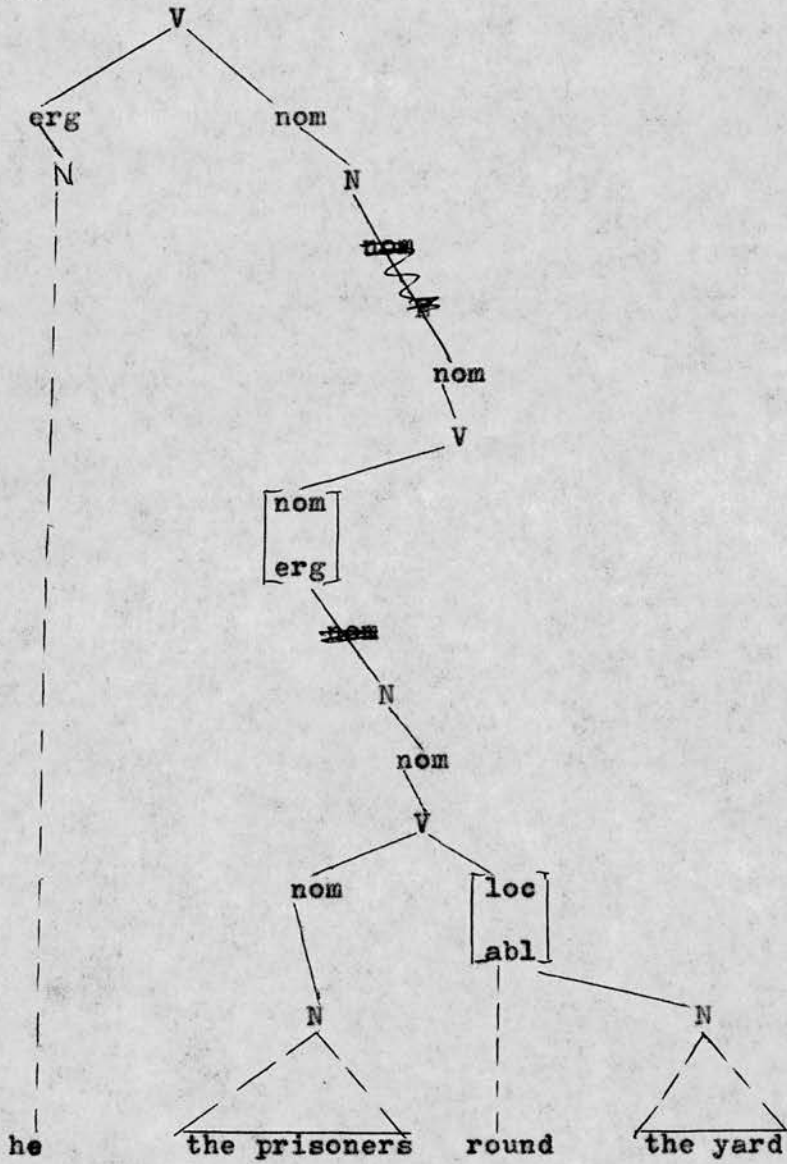


No new transformational rules are required in this derivation; we have merely generalized the notion of causative predication to include intransitive (as well as transitive) superordinate ergatives. (As an example of a non-lexical intransitive causative, consider 'factitive dōn' in Old English: see e.g. Visser, 1969: pars. 1412-1414.)

Examples like He worked them hard represent a derivation from an embedding of an (reflexive) ergative clause in a causative (cf. Lyons, 1968a: par. 8.2.12). And He marched the prisoners round the yard presumably is derived via a double causativization, as indicated in (288):

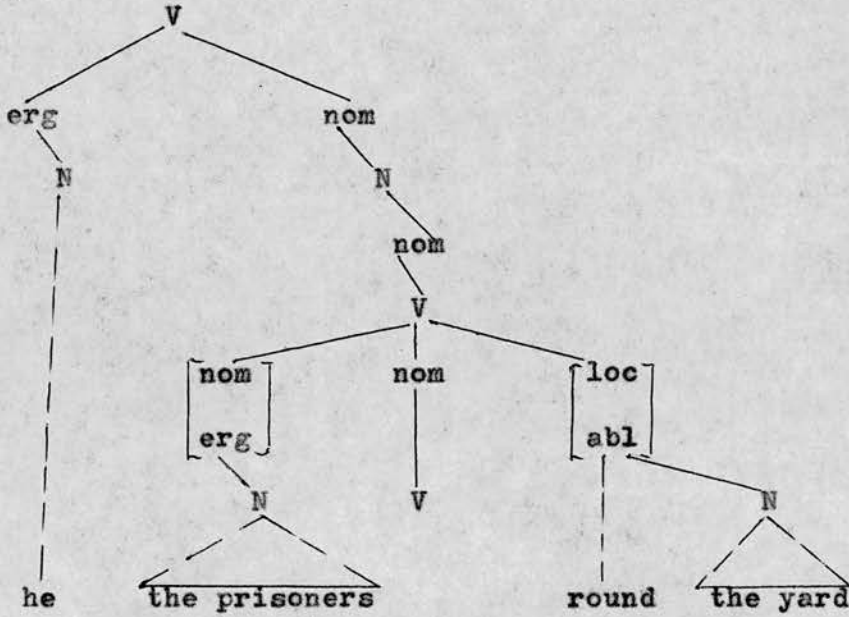


(288)



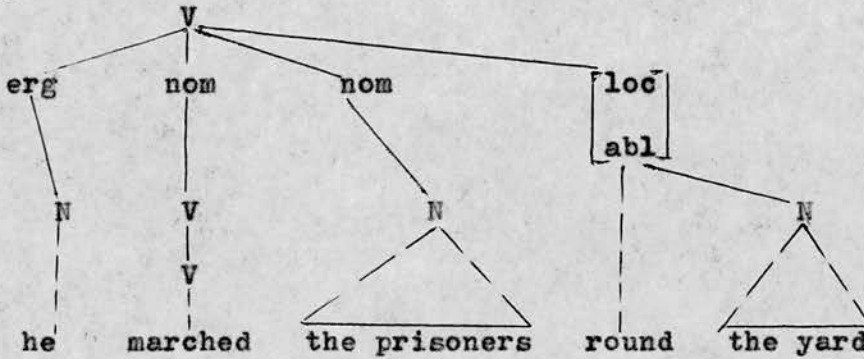
After abjunction of the lowest V and raising of its subject followed by subjunction to the intermediate V, we find (289):

(289)



Finally, with abjunction, raising and subjunction repeated, there results (290):

(290)



Pruning of erg and nom produces the appropriate surface representation.

Such an interpretation of causative clauses (in terms of embedding in a causative superordinate) is fairly straightforward when the character of the constituent clauses is obvious: we are able to suggest quite plausibly that the different kinds of causative involve embedding of locative, or directional, or locative and directional, or predicative nominative (They made

him president), or simple nominative clauses in such a superordinate. But consider now examples like those in (291), which we also suggested (in chapter 3) were causative:

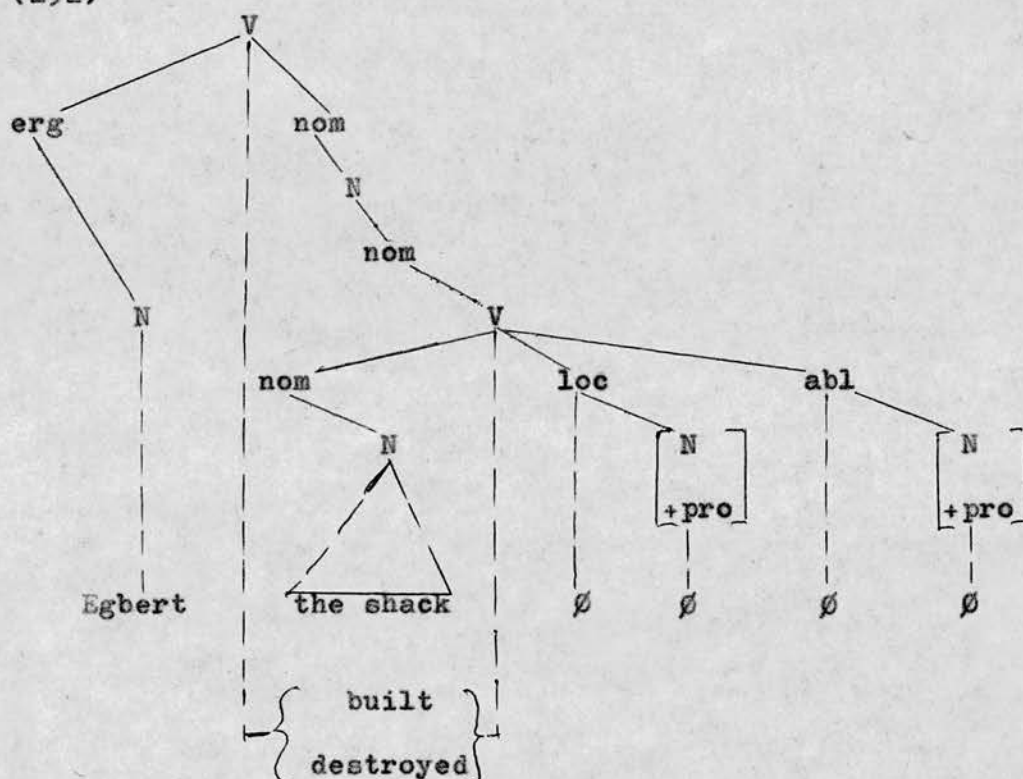
- (291) a. Egbert destroyed the shack  
b. Egbert built the shack

(291. a) can be described as involving 'a change of state' - but of what kind? That is, what is the character of the subordinate clause? (291. b) is a resultative clause (which I argued (in par. 3.3) also forms a sub-type of causative); and the same question arises. If they are to be interpreted in the same way as we have suggested for other causatives, then we must be able to provide motivations for adopting a particular characterization of the embedded clause. (291. a) and (291. b) are in some sort of complex 'antonymic' relation such that (given appropriate referential identity) the former 'undoes' the result of the action of the latter. The simple negative corresponding to a expresses a failure to undo this result; the negative of b denotes that the action producing the result did not take place. If such clauses involve embedding, then the occurrence of a negative is associated with negation of the superordinate causative clause. The build/destroy antonymy has to do with the character of the process denoted by the subordinate verb (positive or negative). Now, the result of the action of b which a undoes is the 'existence' of the shack; and the result of a is to 'put the shack out of existence'. Thus, I suggest (cf. Bally, 1932: 54; Anderson, 1970a) that the embedded clause in the case of (291) is 'existential' - i.e. a sub-type of locative (cf. par. 5.3),



and presumably directional (cf. bring into existence):

(292)



In the case of (291. a) the subordinate is 'negative' (note unmake, undo), in (291. b) 'positive' (compare prevent/cause).<sup>1</sup> Notice that the use of the terms 'negative' and 'positive' in relation to build and destroy is perhaps a little misleading. The distinction seems rather to have to do with the direction of the 'existential movement' ('into' or 'out of existence'). That is, in (291. a) the ablative N is 'positive' with respect to existence, and the locative 'negative'; in (291. b) the polarities are reversed. A similar distinction is involved in the description of the Aktionsarten (ch. 7). The polarity is 'registered' in the

1. It would appear further that ... bring it about that ... involves embedding of a sentence into an existential causative of this kind ('... bring V into existence').



form of the verb. Thus, the distinction between resultative and (other) causatives is related once again to the character of the lower clause, rather than to some (inherent) distinction in the causative superordinate.

#### 6.5. Inter-predicate constraints

The restrictions embodied in II. i in the various sets of rules we have formulated (e.g. (263)) constitute well-formedness conditions for Vs; they specify the class of semantically well-formed predicates. We can think of these as intra-predicate constraints. From these constraints can be predicted (under II. ii) the set of well-formed underlying predications, in terms of the predication constraints embodied therein. The rules in iii are derivational constraints: they specify possible sequences of representations with respect to a developing derivation (cf. Lakoff, forthcoming). It is clear that, apart from such sets of restrictions, there also exist inter-predicate constraints. Vs impose restrictions on Vs that can appear embedded in them (and, as I shall try to establish below, can require the presence of certain kinds of predication above them). We must now investigate the constraints imposed by causative Vs on the predicates beneath them.

The clause subordinate to a causative can only be +stative if it is also 'agentive':

- (293) 1. a. He had/made them be careful (with the vase)  
      b. He had them killed  
      2. \*He had/made them (be) dead

The subordinate clause is notionally 'non-stative'. Even in

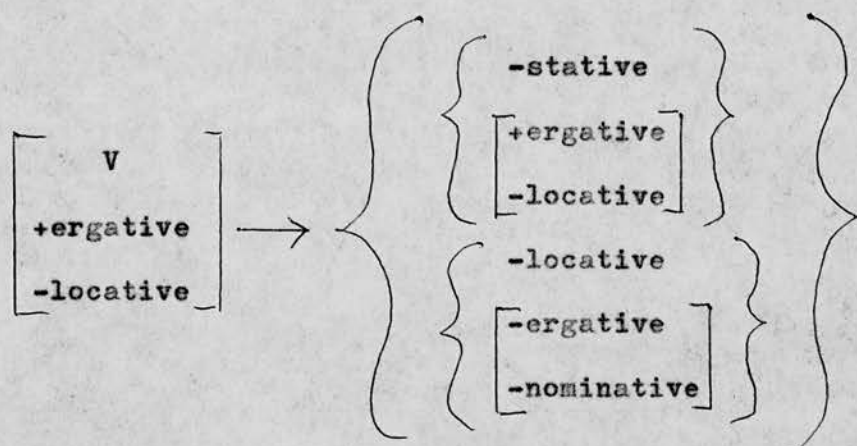
He rubbed it smooth/He smoothed it (by rubbing) the subordinate V is 'inchoative': the +stative ('adjective' vs. 'inchoative verb') opposition is neutralized. There is also no 'passive' possibility (for the higher clause) with super-ordinate have; thus there is nothing corresponding to (293. 1. b) in which both the superordinate and the subordinate clause are 'passive' - \*They were had/made (to be) killed - unless one accepts They were made/compelled to be examined by a doctor as a simple example of such. (This may be a universally marked possibility: cf. Tesnière, 1959: ch. 109.) But They were made to be careful appears to be quite acceptable. This is associated with the apparent requirement imposed by make on the structure of the subordinate clause, that the 'ergative' CS, if present, be subjectivized.

This also means that locative subject verbs like know, contain, etc. are also excluded below cause, etc., as also simple locative verbs like stand:

- (294) a. \*John caused me to know that  
b. \*John caused the bottle to contain milk  
c. \*John caused the table to stand in a corner

(However, as we have already noted, the lexical causative structure corresponding to (294. c) is quite acceptable; thus the constraint is not imposed by causatives in general.) Accordingly, the set of predicates that is excluded below (indirect) causatives is the set of predicates that exclude progressive aspect: 'non-agentive' adjectives and 'stative' verbs. We might formulate the restriction as in (295):

(295)



The arrow is to be read as 'accepts as immediately lower predicate'. For direct causatives, perhaps the first part of the major disjunction can be dropped. A more adequate characterization of the notion 'stative' will enable us to considerably simplify this formulation.

#### 6.6. The grammar of 'buying' and 'selling'

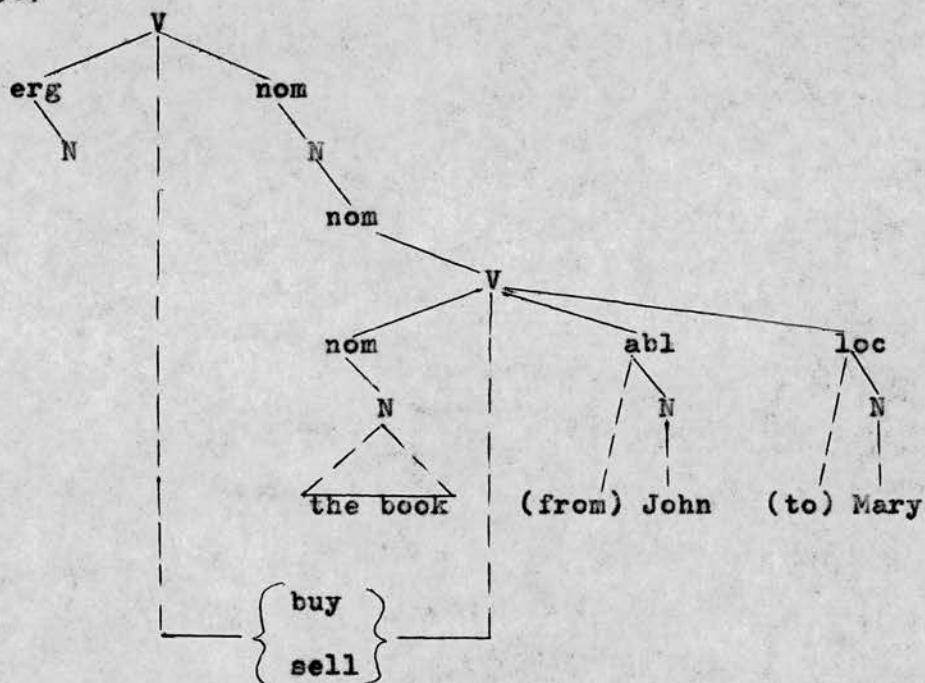
Consider now once again pairs like buy and sell. It is clear that they presuppose an underlying structure like that we associated with roll (cf. (280)) in involving a directional predication subordinate to a causative one. However, with sell in (181. 1. a), the ergative and the ablative Ns are co-referential, and with buy in (181. 1. b) this relationship holds for the ergative and locative. And the ablative and locative, respectively, are absent superficially with sell and buy. How are we to allow for this? A derivation involving a deleted reflexive N is even less plausible in this instance than it was in connexion with the development of reflexive causatives like John left. The reflexive in He sold himself a book (if this is acceptable) involves co-reference of ergative and locative; the co-referential ablative is once again absent. What I am going to propose is that we once again extend the range of causative possibilities allowed for by recognizing not only transitive and intransitive causatives



with empty nominative Ns but also a variant of the transitive in which the ergative N is also empty.

Thus underlying clauses with buy and sell is a structure like that in (296):

(296)

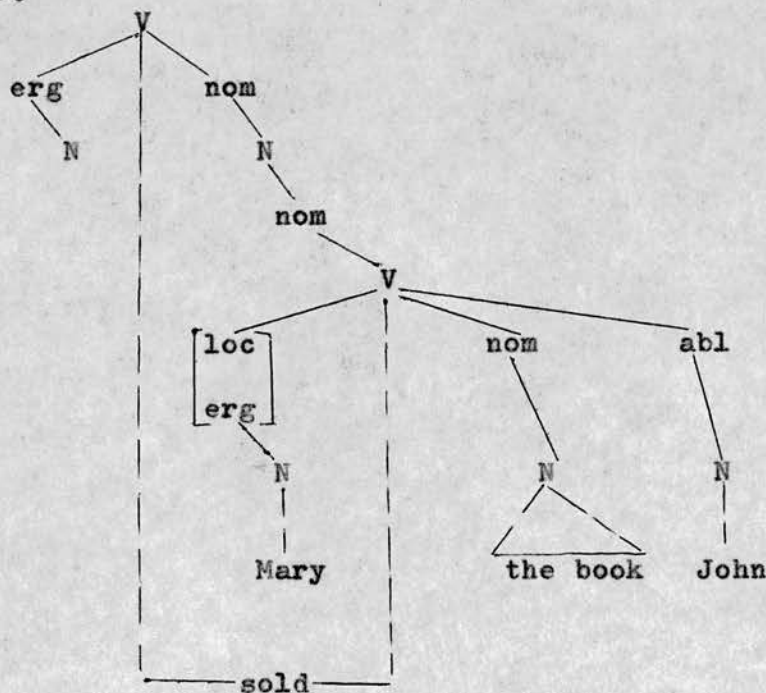


As elsewhere, the lower subject is copied into the upper object position (after abjunction). Either the ablative N or the locative N can be copied into the upper subject place: if the ablative is copied, buy will be inserted; if the locative, sell. So too with other pairs like borrow/lend, learn/teach, etc. As we have already observed, this distinction in copying need not be registered in the shape of the verb: this is the case with hire in English. This derivation seems to me to provide an adequate account of the relations of paraphrase that hold between sentences involving such pairs, and yet to allow, for instance, for the fact that either John or Mary can be the subject of an imperative (as in (183)).

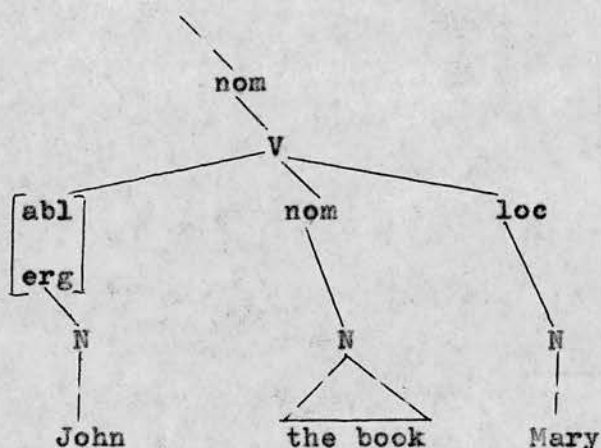


Observe that the possibility of being copied into subject position is available only to an un-ergativized locational N. Thus, if the locative is also erg, it will appear in subject position in the lower sentence, as in the representation in (285). It will accordingly be raised into object position in the upper sentence. Accordingly, in this situation, only the ablative phrase is available for copying as the upper subject. This is how John sold Mary the book is derived. Conversely, in a sentence like Mary robbed John of the book the ablative in the lower sentence is ergativized, and only the lower locative is available for copying onto the ergative phrase. (Cf. Mary stole the book from John, with un-ergativized abl.) The presence of of before book is presumably to mark off John as an object derived from an ablative. Thus, underlying these sentences with sell and rob are, respectively, (297. a) and (297. b):

(297) a.



b.



I have not allowed here for a variant like that in (298):

(298) Mary bought Fred the book (from John)

with an 'indirect object' that originates in a locative distinct from Mary. I.e. (298) appears to be an example in which the ergative phrase is not derived by copying of the lower locative, since there is apparently a reflex of this locative in Fred. However, I do not think that we have to allow for buy to appear in two different kinds of underlying structure (as was proposed in Anderson, 1971c: ch. 12), one with empty ergative, as in (296), the other with it filled, as in (298). I would suggest that 'indirect objects' like Fred have a quite distinct source from that we have suggested for the 'indirect objects' we have been considering. And this is reflected in the distinctive manifestation of the un-ergativized variant:

(299) Mary bought the book for Fred

Compare with this (300):

(300) John sold the book for Egbert

in which the for-phrase cannot have its source in the locative in the directional predication - - cf. John sold the book to Mary.

Rather, the for-phrases in both (299) and (300) and the 'indirect object' in (298) are derived from the locative phrase in a 'dative of interest' predication which (optionally) intervenes between the causative clause and the directional. In each instance, the buying/selling is performed in the interests of Fred.

The absence of an 'indirect object' variant for (300), parallel to (298) for (299), is no doubt due to a constraint intended to avoid a multiplicity of sources for 'indirect objects' with a single set of verbs. With sell we already have the possibility of an 'indirect object' derived from an ergativized loc in the directional clause. We shall return in a moment to a more careful examination of such derivations, after we have established a basic principle on which they depend. A consideration of this principle requires us to return to the derivation we sketched out for (296).

I proposed there that, after abjunction, copying (raising) proceeded in such a way as to raise the lower subject into object position in the upper sentence, and a locative or ablative into subject place. We must now inquire into what determines these 'trajectories': why is not the locative or ablative copied into object position? This will involve us in an examination of other instances of such duplex copying operations.

#### 6.7. The X-principle

We noted in par. 5.3 various inadequacies of a derivation for there is ... +loc and have ... +loc involving simply subject-ivization of a locative phrase which leaves behind a copy in the



locative position: see (162) - (164). Such a derivation cannot be extended very easily to sentences which also contain a 'main verb', like The table has a book placed on it (cf. 169): the placement of a book between the 'copula' and the 'main verb' is unaccounted for. Notice now also that in many varieties of English (including most formal ones?) the copula in There is ... clauses shows number concord with the following nominative phrase:

- (301) a. There are some books on the table(s)  
b. There is a book on the table

The have variant shows concord, as we would expect, with the subject. This too remains unexplained in terms of the account offered in par. 5.3. (See further Traugott, 1969b.)<sup>1</sup>

In our discussion (in par. 6.1) of sequencing, and notions of ergativization and nominativization, it became clear that have is a verb like contain which takes a nominativized locative subject. Now, if we suppose that there is ... +loc and have ... +loc involve a locative subject predication above a locational one (with non-locational subject), then we can regard the concords in (301) as a reflexion of the situation in the lower clause, in which a book/books is subject. Considerations of naturalness (cf. Zwicky, 1968) suggest that the upper predication has locative subject and nominative object - - which case-frame we have associated with have elsewhere. That is, underlying (301. a) and (302):

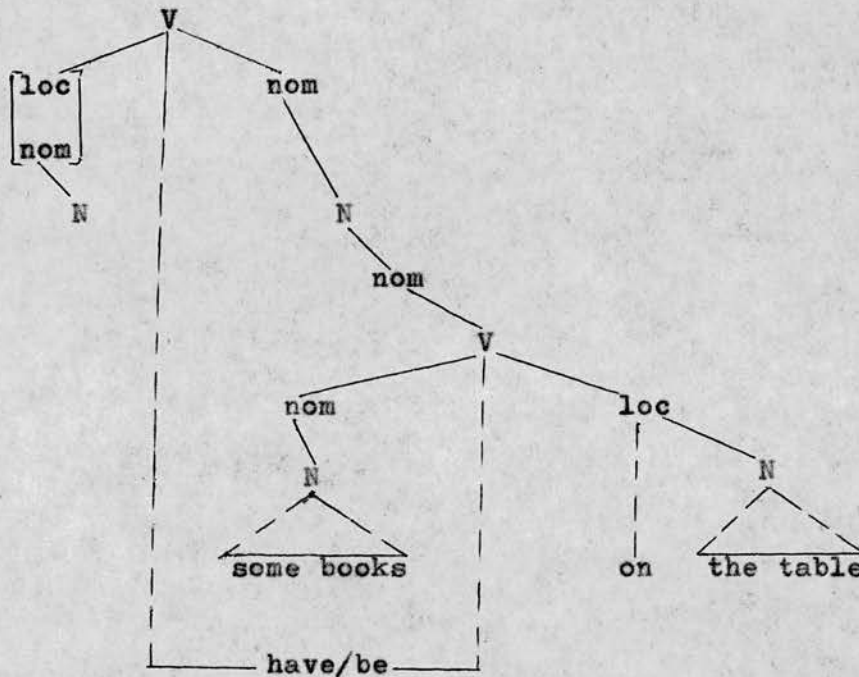
- (302) The table has some books on it

1. For examples of the alternative usage with there, in which the copula is invariant, see Jespersen, 1913: pars. 6.81 & 6.82; and on 'subject-like' features of there, see Jespersen, 1949: par. 3.1.



is a structure like that represented in (303):

(303)



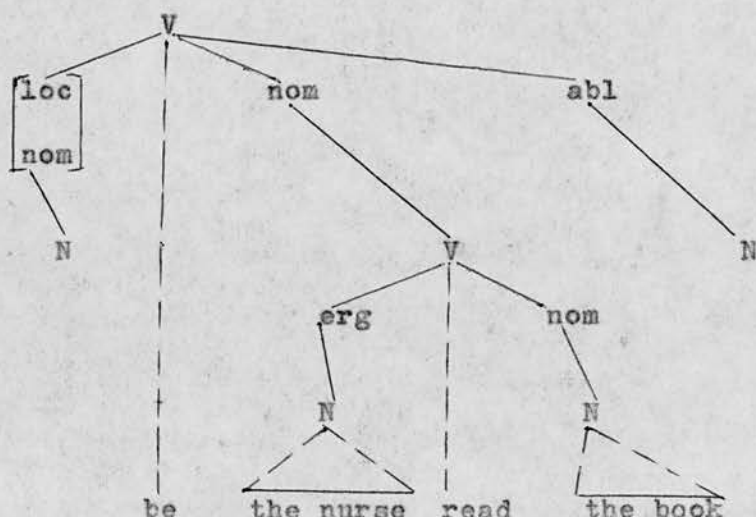
In the course of the derivation, after abjunction of the lower V, the lower locative NP is copied on to the upper (subject) locative and the lower nominative on to the upper. The lower copular V is apparently subjoined to the upper, and, associated with which locative is pronominalized, the original or the copy, have or be, respectively, appears as V. The lower V will develop concord with some books; the upper with the table. However, pronominalization of the locative subject appears to block normal concord, and it is the concord of the lower (subjoined) V that is (in many dialects) manifested superficially - - just as be is inserted rather than have.<sup>1</sup> Notice that such a derivation also provides in an obvious way for the superficial

1. Cf. French il y a with avoir, and a reflection of the locative in the presence of the proclitic y rather than the shape of the subject (the dummy il).

sequence of elements in The table has some books placed on it, with the (non-copular) main verb left behind in post-object position after abjunction and raising.  $\left\{ \right.$  Consider now the passive, initially in English, as a further instance involving a double copying. In the past, most accounts of the active/passive relationship have regarded them as alternative superficial representations for a common deeper structure (cf. Jespersen, 1924: 164), or at least as having in common at some stage in their derivation all but some minimal distinction, and we have also adopted such an account thus far. More recently, a number of scholars have suggested more extensive structural differences between 'corresponding' actives and passives. In particular, it has been proposed that the underlying structure for passives contains as a subpart the structure of the corresponding active, but with this subpart embedded as some kind of complement (cf. Hasegawa, 1968; R. Lakoff, 1968: par. 2.8). It seems to me that such accounts are essentially correct in proposing that the passive construction involves a higher sentence; and further that an interpretation of this kind, but involving empty Ns, throws some light on various apparently unconnected phenomena in English and other languages. The interpretation I shall propose here is also 'localistic', in that I shall claim that the passive predication is a sub-type of locational (and specifically directional) sentence.

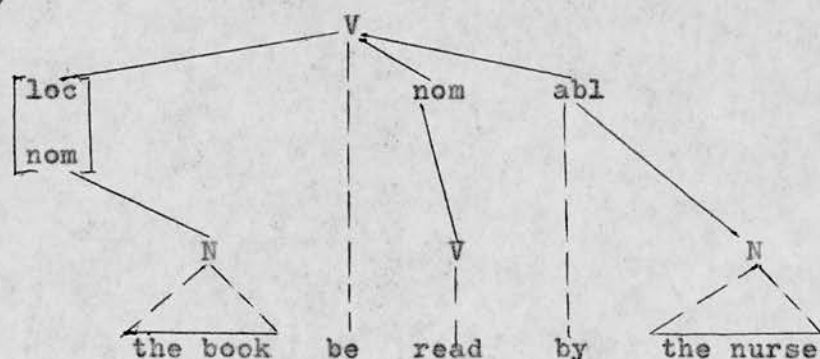
Thus, the post-abjunction representation I propose for a passive sentence like The book was read by the nurse is (schematically) as in (30<sup>4</sup>), in which the locative and ablative Ns are both empty.

(304)



(I ignore for the moment (as in all the preceding instances) the question of tense.) We arrive at a more superficial representation by 'superimposing' the nominative phrase in the lower sentence on to the locative in the higher (which has a dependent empty N), and the ergative phrase in the embedded sentence on to the ablative phrase above (which once more is empty). Thus, we arrive at the structure represented in (305).

(305)

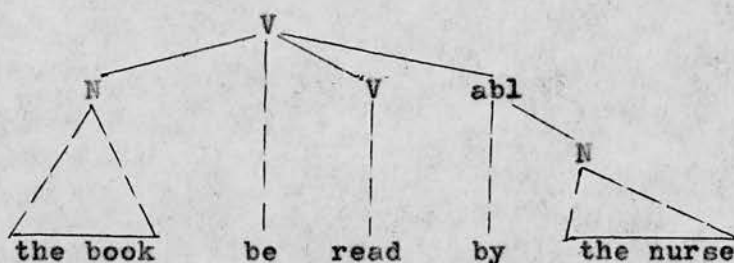


Subsequent pruning of the immediately pre- and post-verbal nodes in the upper clause (subject/object/complement formation) results in (306).<sup>1</sup>

1. I suggested elsewhere (Anderson, forthcoming a) that



(306)



We shall find in this and subsequent instances that the notion 'auxiliary verb' can be defined in a general way (for certain languages) with reference to a V that immediately governs another V.

I have outlined in a rather schematic way a derivation for passives involving a directional quasi-predication. Various details remain unspecified. These will, however, arise in the more general discussion of auxiliaries to follow in ch. 7. At this point I want to outline some of the motivations for this particular interpretation of the superordinate passive sentence - - apart from the semantic appropriacy I would claim for it. As formulated in a well-used traditional grammar of Latin (Gildersleeve & Lodge, 1895, 151), 'The Passive Voice denotes that the subject

... whole case phrases were copied in such instances: i.e.

subject and object node pruning must occur post-cyclically.

This was to allow for the fact that abl in passive sentences in English is represented by by: we could associate this with the presence of erg attached to the abl by copying.

However, this conclusion is unnecessary, since we can indeed regard by as the marker of an abl whose dependent N has undergone copying. Subject and object node pruning can thus be retained as cyclic.



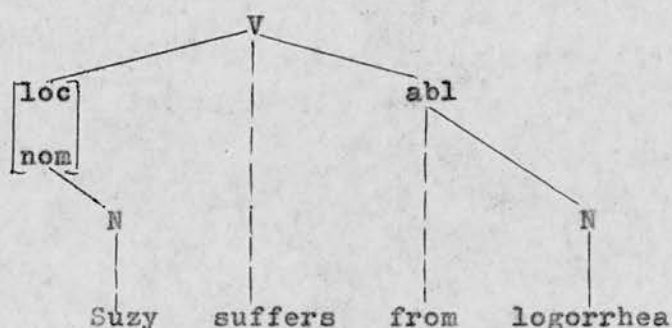
receives the action of the verb': cf. the discussion of 'passive auxiliaries' below.

Observe firstly that the difference between (304), (305) and (306) is the result of processes which have their independent motivation. Further, passive sentences provide the only counter-instances to the generalisation that ergative phrases, where there are such present in a sentence, assume subject position: cf. II. iii in (263). In terms of the above derivation, such sentences are no longer exceptions to this sequencing constraint for the sentence. In the lower, 'propositional' clause, sequencing is as we would expect, with the ergative as subject. It is the rules conflating the lower case phrases with the empty upper cases that reverse the sequence. In this way, such an analysis avoids the objection raised by Chomsky (forthcoming) with regard to Hasegawa's account, in that the surface subject of the passive variant does not start off in subject position, thus allowing for the fact that some passive subjects are not otherwise found in subject position. As we shall see, normally it is the subject of the lower sentence which is superimposed on the empty subject case.

Notice that the passive auxiliary verb in a number of languages (like Chinese or Tamil) is locational and indeed directional, and further, in particular, of the type of 'receive' or 'get', or 'suffer' or even 'eat' (Caldwell, 1875, 358), which takes a locative subject. Cf. Chinese shéu-k'í 'receive insult' = 'be insulted' - see Summers, 1863: pars. 212, 405. I have tried to show above (in par. 5.7) that receive in English is a directional verb which takes a locative subject; it appears in a structure like that of the upper clause in (304), except

that the loc is erg (cf. (205)). Suffer, on the other hand, has a structure of the kind represented in (306):

(306)



which is like the upper clause in <sup>the structure underlying</sup> (304) ~~rather than (305)~~. Thus, it looks as if the presence of 'suffer' as a passive auxiliary indicates insertion with respect to pre-abjunction structure ~~((304))~~, whereas 'receive' is inserted in accordance with the post-abjunction representation of (304). Get is similar to receive, though it can also be causative. And it is an alternative auxiliary of the passive in English in certain circumstances: He got beaten up by the gang. We shall return in a moment to the question raised by the occurrence of be in English, since this does not otherwise appear in the kind of predication we are suggesting for the passive.

In English, we also do not find the normal marker of the ablative as the preposition of the agent in passives; there is a distinct preposition by (which is however also locational). But in many languages this is not the case, in that the marker of the agent in passive sentences is the same as the ablative preposition: consider German von, Dhimal (Tibeto-Burman) sho, the Lappish elative (Collinder, 1957: 201) or of and from in earlier English (Poutsma, 1926: ch. 47, par. 4; Mustanoja, 1960: 385-6, 397, 442-3; Brorstrom, 1965: ch. 1, par. C).

(Cf. too Green, 1914.) This would not be surprising if the underlying representation for passives includes a directional predication containing an ablative phrase on to which the ergative NP is copied, as in (305).

In many languages, there is associated with the passive predication a requirement that the immediately lower clause be transitive (or at least contain two arguments). However, in others, it is possible to passivize intransitives, provided the single argument is ergative. Consider Classical Sanskrit mayā gamyate, 'It is gone by me', or Latin pugnabatur, 'It was fought' (Gonda, 1951; Ernout & Thomas, 1951: par. 226). See too the Turkish examples cited by Lyons (1968a: 379). In such instances, the higher locative position remains unfilled, and the verb is usually said to be 'impersonal' (Gray, 1939: 218-20). In both this circumstance and with transitive passives, the agent is typically absent (Wackernagel, 1920: XXIV-XXV; Jespersen, 1924: 168; Gonda, 1951: 4-6; Hartmann, 1954: 12; Svartvik, 1966: par. 7.4; Lyons, 1968a: par. 8.34). The passive appears to be, indeed, in part a device for removing the agent from a nuclear position (where it would undergo subject formation) to a peripheral one permitting deletion. And this is achieved by the direction in which conflation of the higher and lower case phrases proceeds.

It may be that in some languages at least the originally adnominal case in the equivalent of (304) is loc rather than nom. This is suggested by the occurrence as passive verbs of German werden, Persian šudan, and the like, which also are equivalent to become used with an adjective to express 'change of state' - - i.e. a directional predication of the kind discussed



in ch. 7. Note that get in English is in fact ambivalent, in taking a locative subject (He got a surprise) or a nominative (He got older) - - though in both instances it is directional. On the other hand, the occurrence of be in English (and the like) can perhaps be related to the fact that (prior to abjunction, at least) such structures are not fully directional (with both (non-subjective) loc and abl present). (Be does appear in such ablative clauses as Fred was absent from the meeting or Fred is from Manchester - - though these do not seem to have much in common, semantically, with the passive predication.) However, it may rather be that in such languages the passive construction originates (historically) as an extension of an 'adjectival' (stative, locative) predication. And this may still be relevant synchronically, in the sense discussed in the following chapter: i.e. an adjectival predication may be introduced in such languages as a 'secondary predication'.

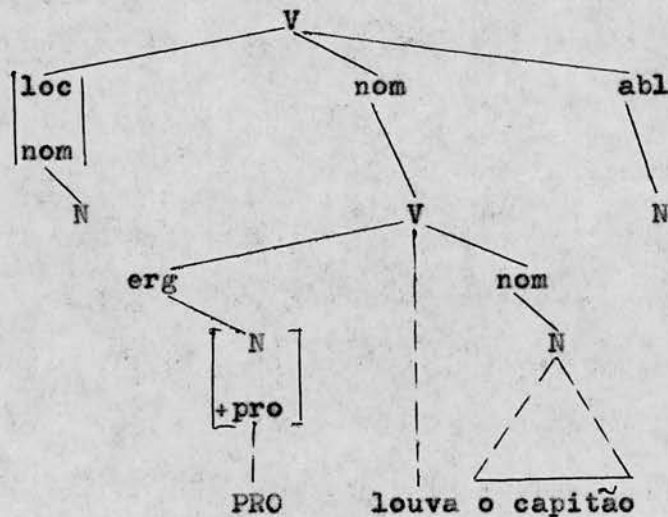
There is one particular refinement of this account of the derivation of passives that I would like to give some attention to, before we move on to consider some further quasi-predications. And this concerns 'reflexive passives'. In a number of languages (e.g. Lithuanian, Icelandic, Spanish) there is a correspondence between the expressions of reflexiveness and of (one form of) the passive. Consider the example from Portuguese adduced by Key (1874: 208): Louva-se o capitão, 'The captain was praised', with the reflexive particle se suffixed to the verb. Such constructions are not entirely restricted to 'agentless' instances - - as is shown by examples like the Italian Da un <sup>u</sup>omo buono non si



ama la virtù per l'utile quoted by Hadley, 1867: 203. And there are also instances parallel to the 'impersonal intransitives' noted immediately above - - as Romanian Se pleacă mâine, 'They (indefinite) are leaving tomorrow'. (Cf. e.g. Sandfeld & Olsen, 1936: par. 125). I am going to suggest that the preceding account of passives will, with a little added precision, allow for reflexive passives also, such that they can be shown to be deriveable (in a very natural way) from the same kind of underlying representation.

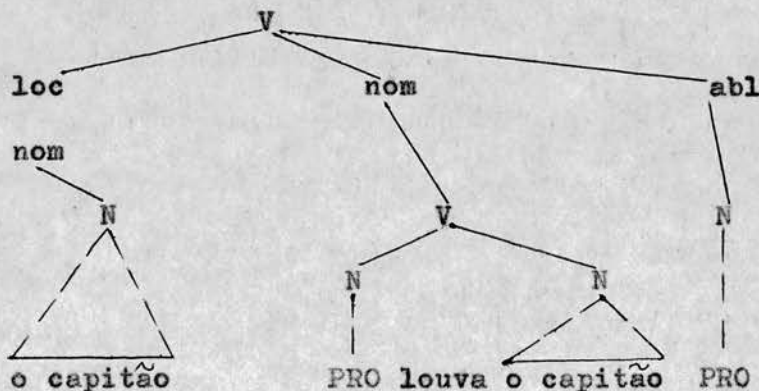
Thus, underlying the Portuguese sentence just quoted we would have (after abjunction) (307).

(307)



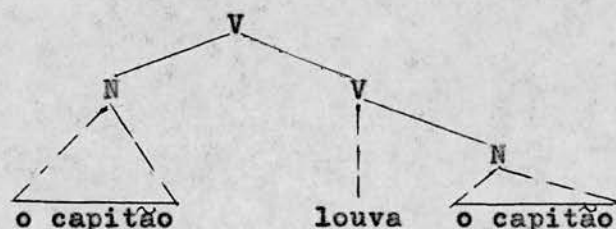
As before, copying of the lower NPs into the empty upper case phrases now occurs, resulting in (308):

(308)



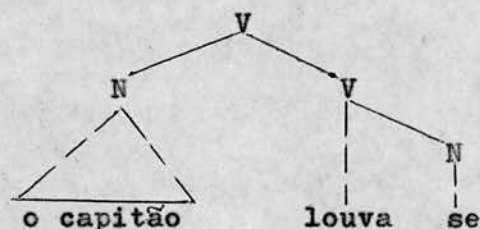
Now, suppose that in this instance, the original NPs are not deleted after copying but retained. The PRO-Ns in lower subject position and in the ablative phrase will, however, as such, be deleted. The structure which this results from pruning of the subject and object nodes is as in (309):

(309)



The structure in (309) meets the conditions for reflexivization; in particular it contains two referentially identical Ns within a single simple sentence (cf. again Postal, 1970). (As I have suggested, a V which immediately governs another V is an auxiliary, and thus does not entail a higher sentence: a continuous succession of Vs in a relation of immediate dependency constitute a single simple sentence.) Thus there is produced after reflexivisation the structure represented in (310):

(310)



It remains to explain why the auxiliary V is given no phonological representation: the lower V is apparently subjoined. Observe too that we must also thus allow for the absence of an auxiliary in 'lexical passives' like Latin fio ('I am made') - - Ernout & Thomas, 1951: par. 227 - - which also differ from reflexive passives in the deletion of the original nominative N.

The lexical difference replaces the reflexive form as the surface marker of 'passiveness'.

Observe finally that a number of 'reflexive passives' are morphologically 'causative reflexives'. Consider some of the Fenno-Ugric languages in this regard (Hadley, 1867: 209-10; Tauli, 1966: 167). We can once more regard the causative predication, however, as 'secondary', in the sense proposed in the following chapter (cf. too Anderson, in preparation a).

There is one further example of duplex copying that I would like to consider now. Notice at this point however that the have/there is derivations and the reflexive passive both provide evidence that these raisings involve copying rather than simple substitution - - since reflexes of both original and copy survive into the surface representation.

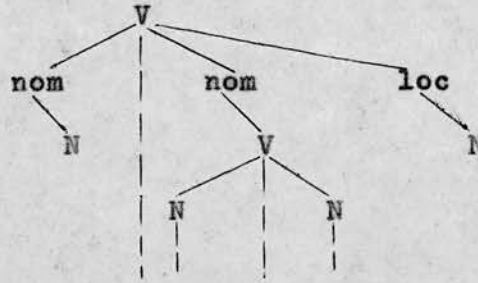
As well as the kind of passive construction we have been considering and the have/there is construction, there also exist constructions with a locational rather than a directional upper predication in which the locative is not in subject position. These are 'dative of interest' predications of the type illustrated in (311):

(311) Epistola mihi est scripta

The interpretation of (311<sup>1</sup>) is complex, because of the aspectual considerations, and we shall return to an examination of these in ch. 7. However, it seems reasonably clear that, if we ignore such for the moment, the structure represented in (312) underlies in part (311) at some stage:



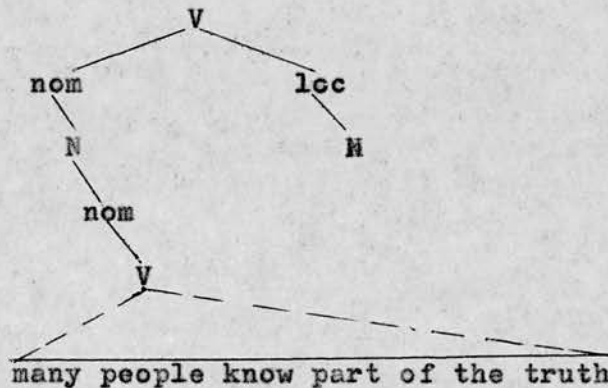
(312)



(This pre-supposes abjunction of the lower V and pruning of the lower subject and object case nodes.) That is, mihi is a copy of the lower subject (into the locative) and epistola a copy of the lower object (into subject position).

As I have indicated we shall investigate this particular variant of the 'dative of interest' in the following chapter. However, observe now that there are motivations for regarding sentences like (148) (Part of the truth is known to many people) as involving just such a construction:

(313)



Application of the familiar rules of abjunction, raising and node-pruning results in the structure immediately underlying (148). The occurrence of to (or a dative inflexion), rather than in or at etc. is a reflexion of the copying of the subject of an ergativized locative verb, as the occurrence of by is a reflexion of the copying (on to an ablative) of a lower ergative N. And this observation leads us to a major motivation for suggesting



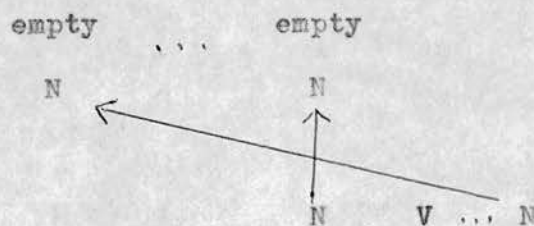
such a derivation for (148). This is that now we can say that verbs like know are always ergativized: not only where the marker of the passive or subject position suggest this, but also in such cases as (148). The loc in the lower clause is ergativized; it is only the presence of the higher 'dative of interest' predication that removes it from the expected subject position. The higher predication, as we have seen, differs from the passive in being non-directional: to marks the higher loc, by the higher abl. Whichever is present, or if neither is, the locative with know is ergativized, and assumes subject position in its clause. We thus arrive at a much less devious manner (cf. ch. 5) of characterizing 'affective verbs': they take ergativized locs.

Similarly, it may be that <sup>a</sup> sentence like (106. b) (The apples are contained in that box) involves a higher locative predication, and that the lower clause has the sequence of (106. a) (That box contains the apples). Once again this means that we can uniformly characterize contain etc. as a verb that takes a nominativized loc as subject. Contain (etc.) does not take an ergativized subject: this underlies the presence of in (etc.) rather than to and the absence of a passive possibility - - since we can now frame an inter-predicate constraint to the effect that the passive requires a predicate immediately embedded in it to be +ergative (and -reflexive in English and the like).

We have now surveyed four different types of duplex copying into empty N nodes: causatives like buy/sell, the have/there is construction, passivization, and datives/locatives of interest. The pre-raising structures are represented in, respectively,

(296), (303), (304) and (312)/(313). In each instance, the effect of the dual raising operation is to move the lower subject out of subject position and to substitute as subject some other phrase, originating as object or in a locational phrase. These trajectories do not appear to be determined by the character of the cases involved (as was suggested, on the evidence of passives and have/there is, in Anderson, forthcoming a), but rather simply by the fact that there are in all these instances two empty Ns to be filled. We saw that if there is only one empty N in the upper predication then it is filled by the lower subject; now it is apparent that if there are two, then again one of them is filled by the lower subject but it is the one that is not in subject position. The upper subject is filled by the other NP; if there are two others then there are two possible copyings - - as with buy/sell. The effect is thus to reverse the sequence of the two phrases involved; and we can indeed regard these various higher predications as 'devices' for allowing subject status to phrases that would otherwise be excluded from such. Elsewhere (Anderson, forthcoming b), I labelled the constraint governing duplex raising that I have just roughly formulated the X-principle, and I shall in what follows continue to refer to it in this way. I indicate this diagrammatically as in (314):

(314)

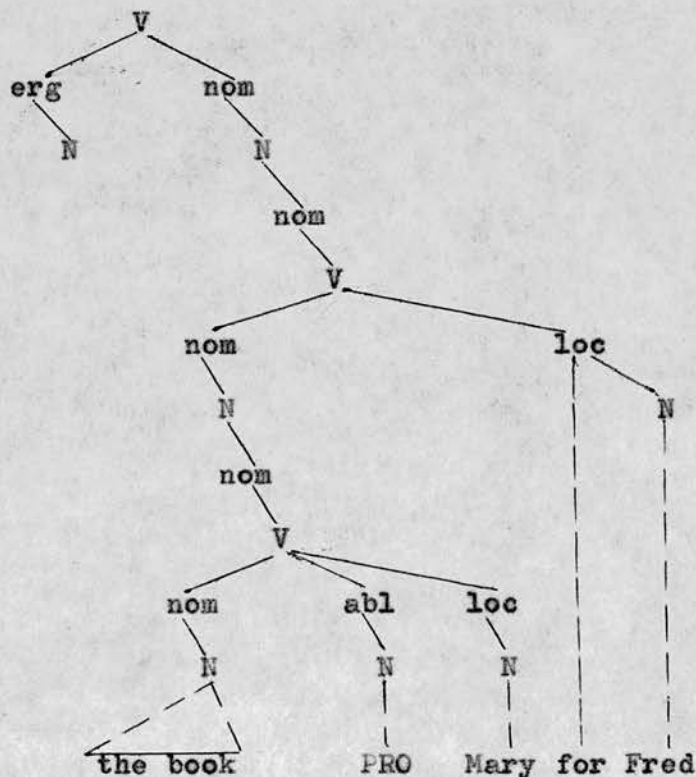


# 6.8. 'Buying' and 'selling' again

In the chapter which follows we shall encounter examples of sentences involving two such predications (with two empty NPs each), which illustrate clearly the cyclic character of the process of duplex raising - - and there is more extended discussion of this in Anderson, forthcoming a, b. However, I would like to indicate here how these processes apply in the case of certain examples we laid aside at the end of the previous section. Consider firstly once again examples like (299): Mary bought the book for Fred. I suggested that such a sentence involves both a causative and a dative of interest predication above the directional. We are now in a position to develop the proposed derivation rather more precisely.

Underlying (299), then, is a structure like (315):

(315)

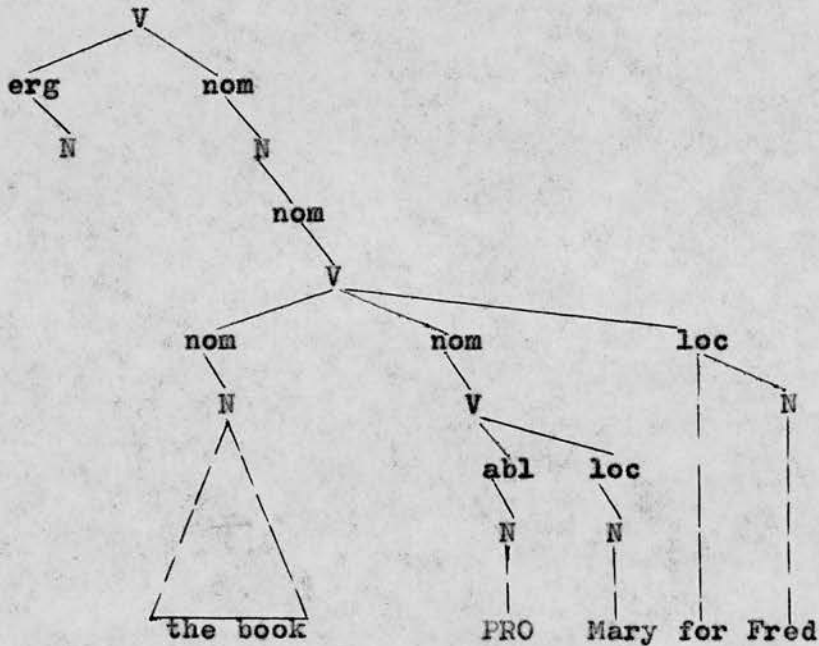




After abjunction of the lowest V, raising can take place.

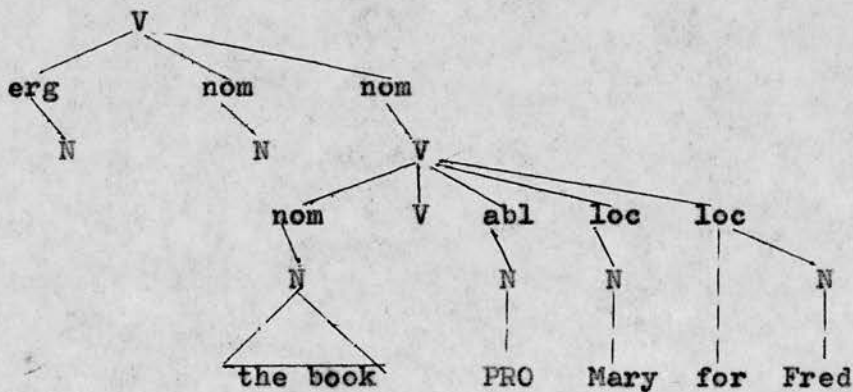
There is only one empty N in the second predication, so it is filled by the lower subject, resulting in (316):

(316)



The subject and object nodes in the second clause are now pruned and the lower V subjoined. This complex is then abjoined and copying with respect to the highest clause can now proceed:

(317)

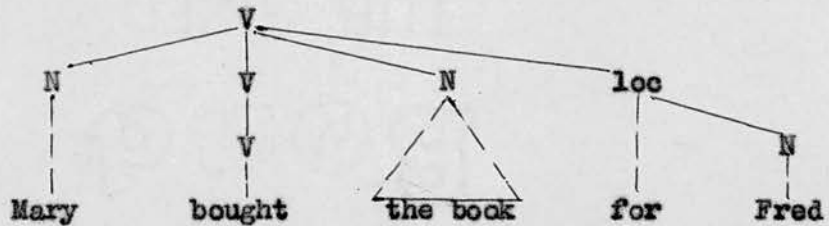


There are two empty arguments, and the lower subject is thus copied on to the second, i.e. the object. If sell were to be inserted, the ablative phrase would be copied into subject position. However,



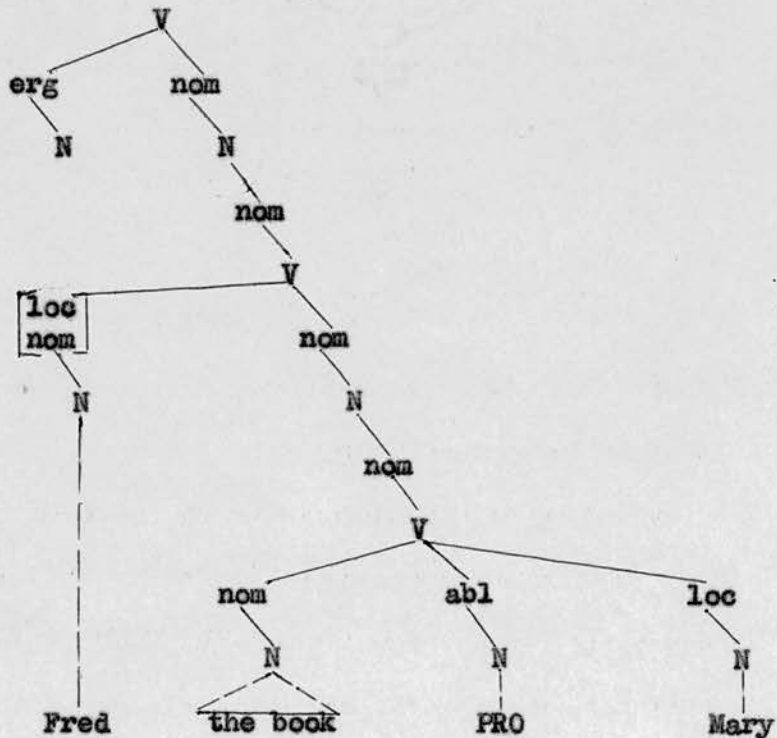
for buy it is the locative Mary that is raised. There is presumably some constraint requiring the nearest locative phrase to be chosen for raising, since for Fred is also locative, but is excluded from raising. After raising, pruning of subject and object nodes and subjunction of the lower V, the resulting structure is as in (318):

(318)

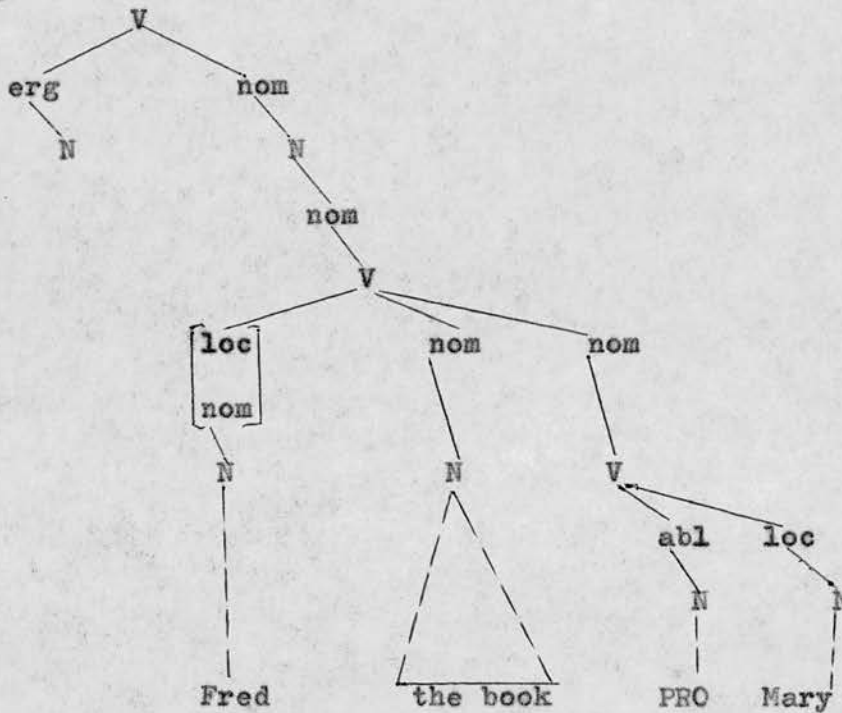


Compare with this the derivation for (298), with Fred as indirect object, which depends upon the 'dative of interest' phrase starting off in subject position, as in (319.a):

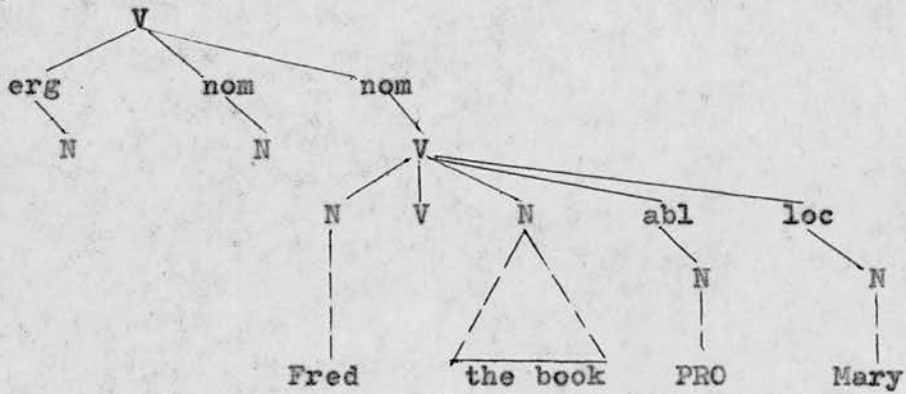
(319) a.



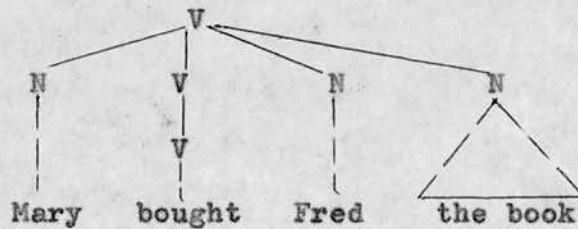
b.



c.



d.



Notice that this reveals some further restriction whereby Mary is selected for raising over the book, which only moves into

'direct object' position as a result of the subjunction of the V on which it is dependent. Clearly, the X-principle determines only the trajectories for copying and the necessary involvement of the lower subject. In complex derivations like those we have just been considering it does not uniquely determine the other case phrase involved in duplex raising. A formulation of these further constraints depends on an exploration of the character of the complex clauses that are likely to arise in a developing derivation. In the present instance, the labelled phrase (loc) is preferred to the unlabelled ('object'); but it is uncertain how general this might be. We can apparently at least formulate a constraint with respect to empty (non-reflexive) erg that it requires a +locative phrase to be copied on to it.

If something like the derivations just sketched out are correct then the function 'benefactive' can in principle be removed from the set of underlying cases: these provide no motivation for an extension of our basic four. Further, we have provided 'benefactives' with an explicitly localistic analysis: a further range of phenomena has fallen within the scope of that sub-part of the general hypothesis which claims that many apparently abstract functions involve location or direction. We have also strengthened the localist analysis of the have/there is construction. Passives too have now been reinterpreted as involving a higher directional predication. This means that we can eliminate the first subpart of the sequencing constraint, and reduce it to the form represented in (320):



(320)

$$\left\{ \begin{array}{c} \text{erg} \\ \text{nom} \end{array} \right\} V \quad (\text{nom}) \quad (\text{abl}) \quad (\text{loc})$$

If (263) is compared, it will be apparent that we have also eliminated one of the post-verbal (bracketed) noms, since indirect objects do not, in terms of the analysis we have since developed, originate in the same clause as direct objects.

We have embarked on two arguments which will inform parts of the following two chapters.

Firstly, with the passive particularly, we have begun to reinterpret the copula as a higher V, rather than a dependent of the 'main verb'. In chs. 7 and 8 we shall extend such an interpretation to all those instances of the copula we have considered so far and also to sentences involving progressive aspect. In chapter 8 we shall also return to the reinterpretation of further causative sentences as involving a superordinate causative predication.



## 7. Temporals and aspect

### 7.1 The analysis of tense

It has long been clear that the phenomenon of tense in the narrow, superficial sense of a modification of the verb that correlates in some way with temporal deixis is not a universal feature of language. See, for example, the brief discussion in Gonda, 1956: ch.II. What is universal is the existence of temporal adverbs which mark various semantic distinctions correlating with time reference, particularly with respect to some public calendar scale or in relation to the moment of locution. (The different kinds of calendar are discussed by Bull, 1963: Ch. 1.) Humboldt (1838: Book 2, § 18, 153-4), for instance, noted that in Tahitian 'tense' is marked by the adverbs nei ('now') and na ('then, past'). Accordingly, I shall claim that in those languages which show tense in the verb this is merely a reflexion of concord with an appropriately specified adverb, which may be deleted in certain circumstances (as we shall briefly discuss below).

The establishment of reference points is effected primarily by the temporal adverbial. The 'tense markers' themselves (in languages in which they occur) merely indicate their existence (or otherwise) at a point in time relative to the time of locution (earlier, later), and sometimes their relative distance from it (as in Kikuyu, with its several past and future tenses -- cf. Gecaga & Kirkcaldy-Willis 1953: 29-33). Thus, the presence of the verbal (tense) suffix -ed (etc.) in English is required by the 'past' specification of an axis-establishing temporal in the same clause

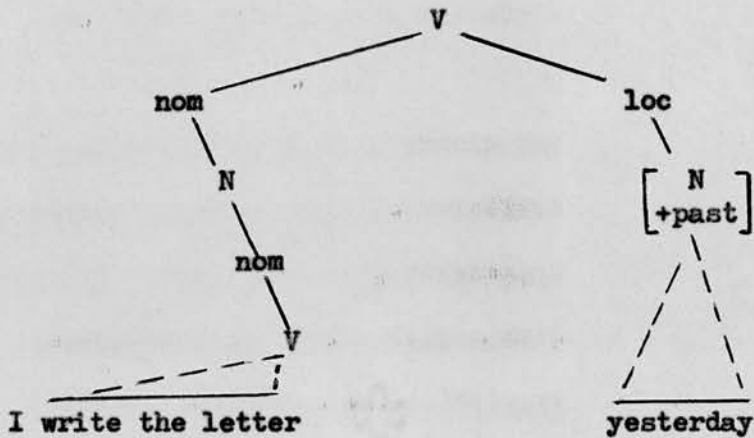
(superficially at least) : He died last Tuesday / \*He died next Tuesday. Adverbials which are ambivalent in form (on Tuesday) nevertheless can be considered to be so indexed (as 'past' etc.) with respect to the time of utterance. And even in instances where there is no overt adverbial of either kind, we can suppose the presence of a demonstrative ('at that (past) time', 'next') or 'pro' adverbial ('at some past time'), the former referring to the previous establishment of an axis (by the occurrence of an appropriate adverbial): see further below, and cf. Anderson forthcoming a: § XII; Gallagher, 1970. Observe that this concord requirement can be suspended - as in the use of the so-called 'dramatic present' or 'historic present' (Jespersen 1931: § 2.3). Further, in English (and many other languages (at least) which show 'past' concord), there is no such concord required with 'future' adverbials: He plays in Manchester tomorrow. The difference between this and He will play in Manchester tomorrow is that of a statement vs. a prediction (on one reading), rather than the omission vs. the presence of a concord element. Clearly 'predictive' elements and 'future' adverbials will frequently co-occur, but not of necessity. As well as the contrast just exemplified, we also find 'present predictions' like He'll be in Cairo at the moment contrasting with assertions like He is in Cairo at the moment. Where we do appear to find a verbal marker of the 'future' (I'm going to leave on Tuesday -- though it is far from being as simple as that even in this case: cf. McIntosh 1966) --, it is in origin frequently aspectual (see below). In semantic representations, I would propose then, tense is associated, like other deictic distinctions, with a

noun in a locative phrase (which is the source for the surface adverbial). Let us look more closely at the sort of representation implied by such a claim.

Suppose that the kind of source for locative adverbials, reason adverbials etc suggested by G. Lakoff (1965: particularly App. F; 1970) is essentially correct, and that in particular they derive from a higher predication. Then clearly temporal adverbials presuppose a similar derivation. It is relevant to note that in some languages the copula of the higher predication is normally preserved in surface structure with unreduced adverbials. Consider Ewe (Westermann 1930: § 90 (b)) éplɔ́ nú le xɔ́ me, 'He wrote thing be (le) in room' = 'He wrote in the room'; (§ 110.1) éva le zǎ́ me, 'He came be at night'. Further, temporal adverbs do not involve a distinct type of predication from those including spatial locatives; they are locative phrases in which the N is temporal rather than spatial. This situation is reflected in the many surface similarities between the expression of time and of one-dimensional space. As Latham (1878: 156) has it, 'What Case refers to in Place, Tense refers to in Time'. Humboldt provides us once more with an example when he further observes that nei and na are spatial as well as temporal: they can be glossed as 'here' and 'there' as well as 'now' and 'then, in the past'. Thus, underlying a sentence like I wrote the letter yesterday is a representation like that abbreviated in (321):

(321)

(321)



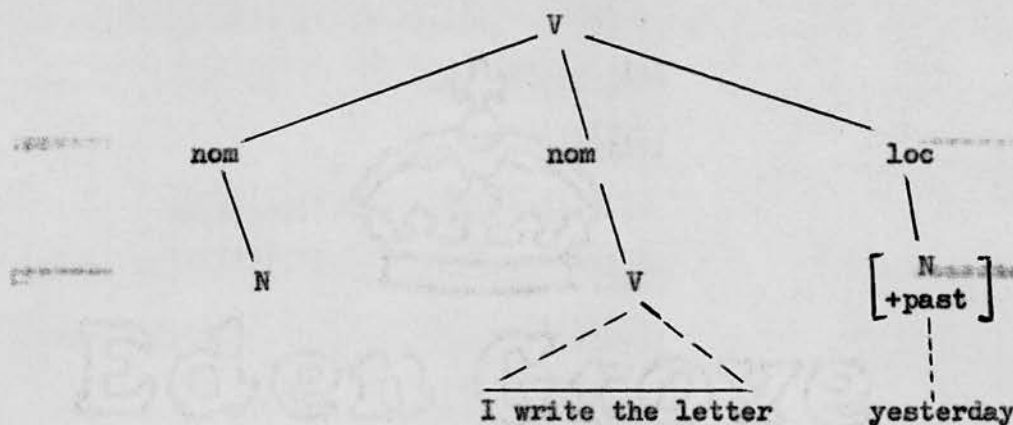
(Where '+past' can be regarded as an abbreviation for whatever the appropriate (comparative) deictic specification might be. It seems to me that such an analysis might be extended to various other adverbials, including reason, and some manner: in all these cases we are concerned with a higher locative sentence, the difference between them lying in the specification of the Ns in the locative phrase.) One question that immediately arises with regard to the representation is (321) concerns the apparent superficial absence of the V in the higher sentence. However, since this appears to be connected with the development of tense marking in the main verb, I shall now turn to a consideration of this latter topic, since a concern with this in fact initiated the present section of the discussion.

What I am suggesting concerning the development of tense is this. Temporal deixis in semantic representations is associated with time locatives. It is only subsequently coupled with a V by a process of subjunction (verbalisation), involving the governing V and the dependent locative. I thus propose the following subsequent development for (321). The nominative N is otherwise

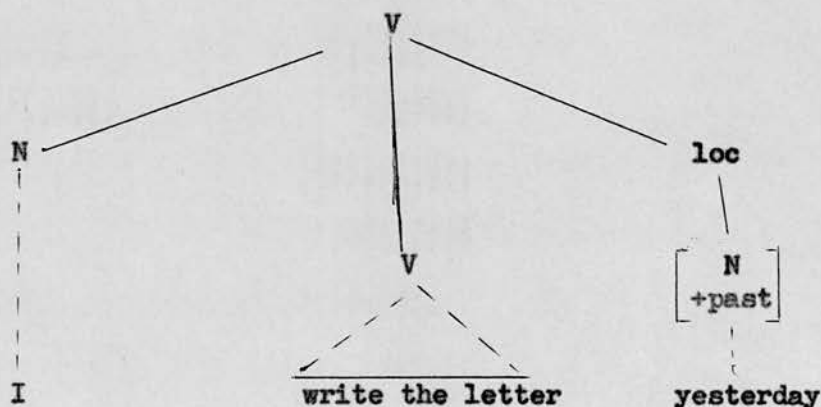


semantically empty; it provides once more a predictable<sup>a</sup> node to which the lower sentence can be attached. The upper V is a simple (locative) copula, and would otherwise be realised as be (cf. Ewe). However, in the derivation of I wrote the letter yesterday, the lower V is moved out from under the N (abjoined) as in (322):

(322)



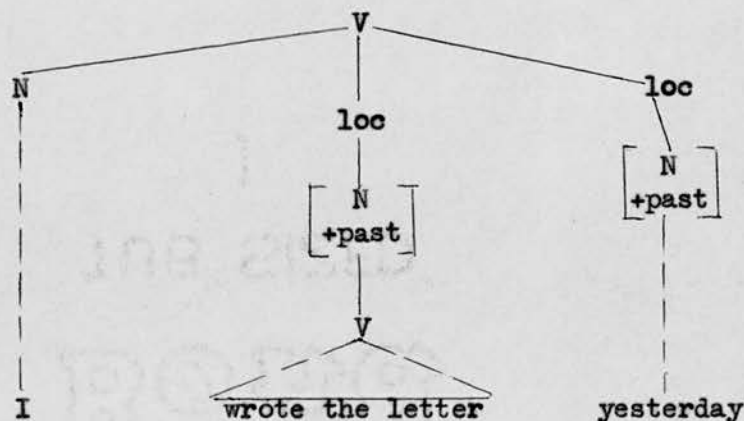
The nominative phrase on the left is freed for the subject of the lower sentence to be copied on to it (and the original deleted). Pruning occurs, and the lower V is subjoined to the upper, as in (323):



Finally, a copy of the locative phrase is subjoined to the upper

V, as in (324):

(324)



It is the subjoined (+past) specification (whatever its status) that is realized (in English) by the tense suffix or ablaut alternant.

This derivation is intended to express what I had in mind in claiming that verbal tense was a concord element (just like person/number markers on the verb). Presumably, where 'concord of tense' is operative, this involves further (inter-predicate) copying operations within the domain of the constraint.

Now, as we have observed, there are sentences containing a past tense in which an appropriate adverbial is lacking superficially. These occur typically when the temporal axis in the past has already been established: such sentences show anaphoric tense marking. I shall assume, as indicated, that they contain an anaphoric temporal adverb ('at that time' or the like) which is deleted after having been copied on to the V. These merely represent then an instance of anaphora by deletion. The time reference is recoverable from the context; the inflexion on the verb merely confirms that this has

not changed. The adverb is alternatively deleteable if it is unspecified ('at a certain past time'): it is a PRO-form. In both such cases, the temporal adverbial can be deleted because no non-recoverable semantic information is thereby eliminated.

However, there are also sentences containing kinds of temporal adverbs which do not in themselves show a [+past] distinction in time reference; and these are typically calendar temporals like in August, in 1984, or the example used in (321). These can either precede the time of locution or not; this distinction is not reflected in their morphology or by lexical differences. Those calendar terms which refer to a cyclical framework can be related to utterance time by means of modifiers like last or next: last August, next year. This and that in English do not serve such a function: they can both refer to either past or future, the difference between them having to do with proximity (in past or future) to the time of locution. But this does mean that the proximate term (this) alone can refer to the present 

-past
-future

 : \*I am living here that year. Calendar forms go with the non-proximate term: they refer either to future or past, but not to the time of locution. In some African languages, absence of a lexical or morphological reflexion of the [+past] distinction extends to locutionally oriented terms like 'tomorrow' and 'yesterday': cf. Ewe etso ('yesterday'/'tomorrow'), nyitso ('the day before yesterday'/'the day after tomorrow') -- see e.g. Blok, 1955-6: 388.

We have then these three sets of temporal adverbs. There are forms which refer unambiguously to past or future (yesterday, next month); there are those which are either past or future (in August);

and there are proximate forms which can be past, present or future (this morning). (Observe that there are some proximate forms that in my English cannot occur with a past tense: \*I went there today.) I do not wish to dwell here on the characterization of such distinctions. My intention is to illustrate the fact that only a subset of temporal adverbials (the first of the three groups mentioned) appear to show the distinction which I have taken as crucial for the development of tense concord in the verb.

At this point in the argument we are faced with an alternative like that which arises in the analysis of pairs like come and go. We observed above (§ 4.6) that the combination of certain kinds of locative with go is not permitted (except in certain non-typical circumstances): \*Go here. The deictic specification of the locative requires the item come rather than go. However, there are certain (in fact most) locatives which allow come or go: He came there, He went there. These sentences are not synonymous; different presuppositions are involved. However, rather than attributing the distinction directly to the semantics of come and go (which is one alternative), I argued that the selection of come and go in such sentences is determined by deictic specifications associated with the locative adverb, distinctions in deixis which are not spelled out in terms of the 'shape' of the adverbial itself, but which nevertheless, like other deictic categorisation (if we associate also definite articles and demonstratives with locatives), is associated semantically with a N in a locational phrase. I would maintain (pace Sgall & Hajicová, 1970) that the same is true in the present instance. That is, even though the various calendar



adverbials do not in themselves spell out whether they are [+past] or [-past], I take it that such a specification is associated with them in semantic representations. The alternative once again is to relate the distinction to V. We would then have to allow for such temporal reference to range over two different kinds of element at the semantic level. It seems preferable to suggest (particularly in view of the non-universality of verbal tense) that this, like other types of deixis, is associated uniquely with N.

Let us move on now to a consideration of the markers of aspect -- though we shall find that questions of tense will continue to concern us. A convenient starting point is provided by the work of a neglected predecessor.

## 7.2 Darrigol and the analysis of aspect

In 1829 there was published a brief account of certain aspects of the grammar of Basque by 'un ecclésiastique du diocèse de Bayonne'. In the course of the discussion, the author (Darrigol, 1829: 100-42) proposes an analysis of the 'tenses' of the Basque (analytic) verb which is in part explicitly localist. He claims (105), for instance, that 'dans les formules du présent erorten niz ['I am falling' -- JMA] erorten hiz ['You are falling' -- JMA] , &c., le mot erorten, qui exprime l'action de tomber, n'est pas un verbe, mais bien un nom au cas positif' [locative -- JMA] . Erorten niz is thus analyzed as a verbal noun in the locative case plus the verb substantive ('be') marked for the first person singular. And other 'tenses' involve other locational cases. Darrigol attributes this morphological

correspondence between the nominal paradigm and certain 'tenses' of the verb to a semantic similarity: 'le point où l'on est (ubi) s'exprime par le cas positif, comme barnean (dans l'intérieur), etchean (dans la maison), ohean (dans le lit), &c. Or l'action que l'on fait présentement peut être envisagée comme le point où l'on est, et dès lors s'exprimer aussi par le positif: de là l'expression erortean n'est autre chose que l'infinitif erortea (le tomber), mis au cas positif: elle signifie donc littéralement dans le tomber' (102).

The morphological parallelism between the expression of spatial location and the marking of certain 'temporal' or 'aspectual' distinctions in the verb is quite transparent in Basque and many other languages -- and I shall try to provide some documentation for this in § 7.3. The extent of the correspondence is so considerable as to argue against an interpretation involving the fortuitous; considerations of naturalness (cf. again Zwicky, 1968) are reinforced by recurrence. Moreover Darrigol's account of the semantic basis for the correspondence seems to me not so implausible as to merit the ensuing neglect of his hypothesis, and indeed the absence of any extended consideration (as far as I am aware) of (the implications of) the data he adduces. --Gèze (1875: ch. 5) provides one notable exception among grammars of Basque, while Garnett (1846-7; 1859) and Key (1874: chs. XII & XIII) assemble (perhaps rather speculatively at times) similar phenomena from other languages -- though without pursuing further the basis for Darrigol's proposed explanation. There are otherwise at most (as far as I know) only passing references to this kind of proposal and the associated

protocols: see for example Wundt 1900: ch. 6, § IV. 6.b; Gray 1939: 168; Entwhistle 1953: 222.

The relevance of Darrigol's analysis to our localistic investigations is, however, I hope, apparent. For he does indeed propose that various temporal distinctions associated with the Basque verb involve different kinds of locational relation. And this is reflected in the morphology of the verb, which (as we have seen) Darrigol analyses as a verbal noun inflected for different 'locative' cases. In what immediately follows, we shall examine to what extent this is an idiosyncrasy of Basque.

### 7.3 Markers of aspect.

Darrigol (1829: 115-3) observes, then, that the 'present' and 'imperfect' 'tenses' in Basque are marked by the locative form of a verbal noun plus respectively the 'present' and 'past' ('imparfait') of 'be'. So:

- (325) a. Ethortcen niz ('I am coming')
- b. Ethortcen nintzen ('I was coming')

In both cases, an event ('my coming') is represented as being in progress at a certain time, either the present or in the past. The combination of locative of the verbal noun and 'auxiliary' thus represents what I shall call progressive aspect. The situation in Basque is somewhat more complex than this, and we must return below to a more careful consideration of the meanings of (325.a) and (325.b). However, I observe at this point merely an association between progressive aspect and a locative predication.

In those other languages for which I have been able to find some sufficiently explicit account of tense and aspect, there is also a consistent association of this kind, i.e. of progressive aspect (where it is given separate expression) and (if anything) predications involving ('be' plus) case particles (marking the verbal noun) -- inflexions, prepositions, postpositions -- that are also used (or have been used) to indicate '(spatial) location at or in', except for those less numerous instances where we find superficially simply ('be' plus) predicative nominal. The parenthetical 'if anything' in the preceding sentence refers to the fact that in a number of languages I have been unable to determine that the marker(s) of progressive aspect are not idiosyncratic. I want now to illustrate something of the range of languages displaying the structural characteristics described.

Consider now Ancient Egyptian. There we find as a marker of progressives hr, as in (326):

(326) mš' / hr prt ('The army <sup>is in</sup> <sub>was on</sub> going forth')

But this (as implied by the gloss) is (elsewhere) a locative particle, as instanced in (327):

(327) ʔst hm · f hr h3st Rtnw ('Lo his majesty in the land of Retenu')

(See Gardiner, 1927: § 119.)

Similar examples can be found throughout the Hamito-Semitic group. In Margi (Northern Nigeria), we find (Hoffmann 1963: 175):

(328) ní\_ vār wī ('I am running')

in which vār appears to represent a reduction of əvə̀r, which in turn is composed of wí or ú ('in') plus íví ('place'). (See Hoffmann, 1963: §§ 281, 435.). Perhaps similar are So\_ nay ay go no m'a te



('I am there doing') (Prost, 1956: § 270) and Fulani mi don winda ('I here write') (Taylor, 1953: ch.12, § 6 -- cf. ch.11, § 2, and see too Lacroix, 1963: 41). Compare too periphrases like French être en train de.

The examples in the preceding paragraph involve not only a locative particle governing the main verb but also a (apparently superordinate) noun. Such possibilities will assume some importance later in our discussion. However, as a further example with a simple locative particle, consider Swahili Nina soma ('I am reading'), which consists of ni ('I'), na and the verb stem soma (Ashton, 1944: ch. VIII), na being used elsewhere as a preposition meaning 'with' (Enda nam, 'Go with me' -- Ashton 1944: 102). Other examples of this kind involve da in the Australian language Kamilaroi (Gummilroy) (Müller, 1882: § A. III), locative -da added to the infinitive in -maq in Uzbek (von Gabain, 1945: § 290) and to the infinitive in (particularly written) Turkish (Godel, 1945: § 136), and perhaps -ma in Mende (Crosby, 1944: chs. VI-VII), -ki(n) in Atakapa (Swanton, 1929: §§ 10,21) and -in in the Balti dialect of Tibetan (Grierson, 1909: 37). Manipuri (Meithei) appears to show both such a construction (Tong-da-nā lai ('Riding-with he-is'), involving nā ('with'), and a construction in which nā is attached to the 'subject' -- Ai-nā phū-rī ('Me-with strike') -- see Grierson, 1904b: 29.

Among the Indo-European languages, perhaps the most striking examples of the occurrence of locative particles as markers of progressive aspect can be drawn from the Celtic group. In Scottish Gaelic, sentences like the following occur:

(329) a. Bha e ag gearradh craoibhe ('He was at cutting of a tree)

b. Bha e'na shuidhe ('He was in his sitting')

Compare the Irish Tá Seán ag marú an choinín ('John (Seán) is (tá) at (ag) killing (marú) of the rabbit (an choinín)') and Tá Seán ina sheasamh sa gcúinne ('John is in his standing in the corner').

Observe too that in Scottish Gaelic, as well as (330.a), with third person agent and first person patient, we also find (330.b):

(330) a. Bha e aig mo bhualadh ('He was at my striking')

b. Bha mi 'gam bhualadh ('I was at my striking')

with first person patient and unspecified agent. That is, in such instances, either agent or the patient appears both as the surface subject of the sentence and as a modifier of the verbal noun, which once again will be of importance in our subsequent discussion. These examples as a whole suggest even more strongly than the instances we have considered so far that 'progressive constructions' derive from a more abstract representation involving two predications, a locative one being superordinate to the sentence containing the main verb.

Even in some languages without an obvious locative marker for the progressive we find similar evidence for a double predication.

Consider the following Zulu sentence (Crout, 1859: § 227.1):

(331) ngi be ngi tanda ('I was I love')

Compare Venda Ndo-vha ndi-tshi-vhona ('I was I seeing' -- Doke, 1954: 172), in which tshi appears to be a nominalizing suffix (cf Doke, 1954: 160). A slightly different (and perhaps even more striking) kind of evidence is provided by examples like Cheremis Oget türet ile ('They do-not-cut was' : Sebeok & Ingemann, 1961: 23-4 -- see too Tauli, 1966: 74-5), in which the 'auxiliary' does not show subject concord. Ross (1969a) has adduced various pieces of syntactic

evidence (primarily from English) suggesting categorial identity for 'main verbs' and progressive be (and other 'auxiliaries'), the progressive construction thus involving embedding of a sentence containing the 'main verb' in a sentence containing be as its verb.

Observe further with respect to examples like (329.b) and (330) that the occurrence of a 'possessive' (i.e. adnominal) pronoun with the 'main verb' tends to confirm its (superficially) nominal character in such languages. And evidence for this status can once more be found even in languages in which no locative particles appear in such circumstances.

The progressive in (for instance) Kolrën (Koireng), of the Kuki-Chin group (Grierson, 1904b: 237), is expressed by verb substantive plus verbal noun. Similarly, the expression of progressive aspect in English is in terms of be plus a form of the verb which is traditionally called the 'present (or active) participle' but which is identical in shape to the verbal noun. Notice that there are widespread examples in Early Modern English in which the progressive form, if involving a transitive verb, takes an object marked with the adnominal preposition of. Thus (Jespersen, 1931: § 12.3 (4)):

- (332) a. are you crossing of your selfe  
b. [I] am building of a new shop

Even in Contemporary English the distinction between 'gerund' (verbal noun) and 'participle' (verbal adjective) tends to prove elusive (if not illusory) for many grammarians. Thus Onions observes: 'On account of the identity of form between Verb-Noun and Verb-Adjective in -ing, it is sometimes difficult to determine to which part of speech a particular form belongs' (1904: 131).

It would appear that the decision is usually made on the basis of whether or not the instance in question is also marked as a nominal form in some other way. Thus, if it is preceded by an article or quantifier, or a (pro)noun in the genitive or a preposition (but not a conjunction) or followed by an of-phrase, the -ing form is regarded as a gerund. Compare the pairs in (333):

- (333) 1.a. What is the use of his coming?  
       b. What is the use of him coming?  
       2.a. He prevented them from leaving  
       b. He prevented them leaving

(Cf. Onions, 1904: 130-3.) Only the a example in each pair contains a gerund. Problems arise with a form that can be either a conjunction or a preposition. Thus, though While fighting... involves (for Onions) a participle, After fighting... is discussed in the section on gerunds.

Some recent studies (cf. e.g. Grady, 1967; see too Bach, 1967) have indeed proposed that -ing is universally (including as a 'marker' of progressive aspect) a nominalizing affix for verbs. Marker of 'abstract noun' would seem to be its historical source (though the subsequent development is complex and controversial -- Åkerlund, 1911; Curme, 1913a; Mosse, 1938; Jespersen, 1931: § 12.1 Dal, 1952; Mosse, 1957; Nickel, 1966; Braaten, 1967). This nominal status is fairly clear in the case of the examples quoted in (332) and also with the (presumably related) construction involving be + a - verb -ing, which it has been argued may underlie (historically), at least in part, the development of the extant progressive construction. Consider the examples from Early Modern English cited by Jespersen



(1931: § 12.3 (2)):

- (334) a. They had ben a fyghtying  
b. who were merrily a working

A here is (historically, at least) a reduction of a full preposition, as it is in examples involving nouns like that in I would they were a-bed and the others noted by Abbott (1883: 32-4). Jespersen (1931: § 12.3 (1)) also adduces examples containing full prepositions, as in your neighbours nigh, that have on hunting beene -- or in an example remarkably like the Gaelic such as whyl this yeman was thus in his talking. Such sentences involve once again expression of 'progressiveness' by locative particle plus verbal noun.

Bolinger (1971) has recently adduced various pieces of evidence both for the progressive -ing as a nominalization and for its occurrence in a locative phrase. With regard to the latter, apart from what is suggested by pronominalizations like He was working an hour ago and I guess he's still at it, he points to, for instance, question-answers pairings like What are you at now? -- I'm getting these reports ready, and parallels like He is at prayer (He is praying), and to the possibility of co-ordinating adverbials and progressives (They're already in position and champing at the bit), etc. With respect to the former, consider his set Coon-hunting is a sport, They're coon-hunting, \*They coon-hunted, in which other parts of the finite paradigm do not permit this form of compounding otherwise associated with obvious nominalizations.

Thus, there is evidence that the absence of a locative preposition in contemporary English is only a relatively superficial phenomenon and that the progressive form is a verbal noun. Manx

occupies a sort of intermediate position in showing the locative marker only before a verbal noun beginning with a vowel (Kneen, 1931: 140). It is part of Garnett's argument (1859: 270-7) that 'present participles' are in general to be interpreted (historically) as (reduced) forms of verbal nouns with locative marker. While some of his analyses may strike one now as rather fanciful, I must (as I have indicated) concur with his impression that in those instances where it is possible to identify such participial forms with anything, it is locational expressions that are involved. Bolinger's discussion suggests that the relationship is not merely historically relevant.

All this is not to deny that participles may be morphologically distinct and that (even where not) can be said in certain clearcases to 'function' superficially like adjectives (for example, as attributes of nouns), but rather to suggest that at some stage in their derivation we are concerned with nominalization of a verb within a locative phrase. The presence of -ing (and of a- in (334) and with corresponding (non-verbal) nouns) is to be explained on this basis, whatever the superficial status of the element involved. With respect to morphological distinctness and the superficial adjectival character of present participles, we should note that there are indeed a number of languages where it is the present rather than the past (cf. below) participle that is morphologically similar to adjectives -- as in the Naga-Bodo language Mikir, in which both adjectives and present participles bear the prefix ke- / ki- / ka- (Grierson 1903: 384-5, 389). And, in English, both exciting and excited are usually considered to be 'adjectival' as well as 'verbal'.

An alternative manner of indicating the nominal character of the

verb in constructions of the kind we are concerned with is provided by those languages in which the noun has a distinctive 'status constructus' ('construct state'). So Taylor (1959: § 21): 'In English when the so-called genitive case is used, e.g. "the king's horse", it is the noun of the possessor which alters; but in Hausa it is the noun of the thing possessed which changes, ... e.g. dokīn sarki [dōkī, 'horse'; sarki, 'chief' -- JMA] . This relationship between the two nouns whereby the first is determined by the second (in Hausa) as regards some quality or material, is called the construct state...' In forming the 'present tense' of transitive verbs in Hausa the verb is put into the 'construct state': i.e. it is marked as a verbal noun 'determined by' the object (cf. the sentences in (332)). Thus we find (Taylor 1959: §§ 37, 98):

- (335) a. sunā harbī ('They are shooting')  
 b. sunā harbin naman-jējī ('They are shooting game')

in which the verb in the b (transitive) instance appears in the 'construct state' (cf dōkī /dokīn).

With respect to the superficially nominal character of the verb, we should perhaps note further at this point, and distinguish, another, more general claim that has been made concerning the 'nominal' character of the verb. Garnett, for instance, argues elsewhere (1848-50; 1859: 289-342) 'that the root or predicative part of a simple verb is, or originally was, an abstract noun, and that the personal terminations are pronouns -- not however nominatives in apposition, but in regimine, or oblique case'. That is, in many languages, the 'finite forms' of the verb are marked as nominalizations by, in particular, the presence (as clitic or affix) of pronominal

elements inflected as they would be if subordinate to a noun. For example, consider the instances from Abkhaz cited by Garnett (1859: 308-9), drawing on the work of Rosen:

- (336) 1.a. s-ab ('my father') b. s-nehoit ('I pray')  
 2.a. n-ab ('your (sg.) father') b. u-nehoit ('You (sg. pray)')  
 3.a. i-ab ('his father') b. i-nehoit ('he prays')  
 4.a. h-ab ('our father') b. ha-nehoit ('we pray')  
 5.a. sh-ab ('Your (pl.) father') b. sh-nehoit ('You (pl.) pray')  
 6.a. r-ab ('their father') b. r-nehoit ('they pray')

We have here a regular correspondence between the (subjective) pronominal affixes of the verb and the form of the personal pronouns indicating subordination to a noun.

Garnett attempts (not implausibly) to show this for a wide range of languages (including Indo-European), with regard to which it is perhaps sufficient to note as a distinct sub-type his examples from Hungarian involving the 'definite' (or 'objective') conjugation (verbs with a 'definite' object -- Csink, 1853: 265-7; Sauvageot, 1951: 68-75): kéz-em ('manus mei'); esmert-em ('cognovi'). Of course, as Garnett concedes (1859: 303), this correspondence between the 'pronouns possessive' and the 'personal endings' of the verb is not always complete. In Hungarian, for instance, it is in some cases the 'indefinite' (or 'subjective') ending that is identical to the possessive: see e.g. the forms tabulated in Csink, 1853: 118ff. But this is not sufficient (despite Sauvageot, 1951: 73-4) to render the degree of correspondence negligible, particularly in view of the parallels in other languages. Considerations of naturalness again require otherwise.

For reference to other instances of such phenomena, see, for



instance, Wundt, 1900: ch.6, §IV.2-4; Entwhistle, 1953: 212-3. Müller (1882) offers examples from a large number of languages and language groups, including Algonquian (C.II), Iroquois (C.III), Cherokee (C.IV). As a final instance, consider the identity reflected in Vei (S.W. Liberia) nā dsére ('I return') and nā dúma ('my shirt') (Koelle, 1854: §24). In such an instance the correspondence involves personal pronominal forms in general. In Hungarian, as we have seen, the relationship is between the expression of 'possession' and of 'transitivity' ('transitive' verbs with indefinite object being regarded from this point of view as 'intransitive'), there being a correspondence between the transitive subject affixes and the 'possessive'. Allen (1964) adduces many further examples like this in other language groups. However, in other languages, it is the personal pronouns when the 'subject' of intransitives and the 'object' of transitives that are identified with the 'possessive' forms -- as in Tsimshian miā'nu ('my master') and sīp̄Enu ('I am sick') (Boas, 1911c: §§ 48-54). (See too Uhlenbeck, 1916b). In a number of languages, then, the character of the 'personal endings' (or independent pronouns) appears to suggest in various ways that the 'main verb' is a verbal noun superficially. It is not my concern to investigate such phenomena here. My intention has been merely to differentiate this kind of evidence from the indications in various languages that the 'main verb' in sentences involving progressive aspect is nominal. I would however indicate that such phenomena are quite consonant with the derivation of 'tense' proposed above, and in Anderson, forthcoming a, which involves a superordinate tense predication.

Let us, however, register a reservation concerning the kind of data that have been adduced as evidence for the nominal character of the verb in various languages. Observe that the mere coincidence of 'shape' between the personal endings or pronouns used with the verb and the possessive affixes or pronouns is in itself not evidence of a nominal character for the verb. The coincidence in Vei may, as far as I can tell, be merely a reflexion of the fact that the pronoun is invariant in this respect: it does not have separate subjective and adnominal forms, just as nouns in an adnominal relation may not differ in 'shape' etc. from subjective nouns. Most arguments concerning the nominal character of the verb in particular languages are more sophisticated than this. However, Mey (1970), for instance, has argued that the morphological correspondences in Eskimo (at least) between the expression of transitivity and possession do not necessarily require an explanation in terms of the verb being (superficially) nominal in character, in that the possessive construction can be regarded as a reduced transitive sentence. Compare too already Key's (1874: 317) scepticism concerning Garnett's hypothesis. It is not clear, however, how one might extend Key's or Mey's account to the situation characteristic of languages like Tsimshian, which show a relationship between the 'possessive' affixes and those for the intransitive 'subject' and transitive 'object'. However, on this, cf. Sapir, 1917b. On the whole I must confess that I do not find the alternative proposals offered by Key or Mey or Sapir particularly compelling, particularly since no one of them accounts for all the different kinds of correspondence we have noted. But they do at least require us to consider more carefully the validity of certain

conclusions concerning such relations between the 'parts of speech' that have frequently been drawn in the past.

So far, in this section, apart from in the preceding digression, we have surveyed various phenomena which appear to show that the 'main verb' in certain languages is superficially nominal in sentences expressing progressive aspect, and that this verbal noun is included in a locational phrase with a case particle denoting 'in', 'on' or 'at' -- i.e. non-directional.

I should make it clear at this point that I am not suggesting that this set of instances of progressive aspect is completely homogeneous, <sup>that</sup> in they obey the same restrictions on their occurrence or are semantically identical. In particular I would like to take note of the fact that in certain languages progressive aspect (as opposed to an accompanying adverbial) can apparently have a (non-emphatic) 'habitual' interpretation, whereas in others this is only possible in progressive sentences (if at all) when there is an overt marker of iteration present. The former forms are imperfect rather than merely progressive (Jespersen, 1924: 275-7). Consider a French example like Il lisait une heure après le petit déjeuner (Vinay & Darbelnet, 1958: 146), which contains an instance of the 'imparfait' which cannot be translated simply by an English past progressive, even though there is a correspondence in non-habitual occurrences. This too will have to be provided for within the framework we develop below, together with the frequent absence of present imperfects (as French, Latin but not Basque), as compared with simple progressives. Co-existence of an imperfect and a simple progressive must also be allowed for: 2e/he in Adamawa Fulani (once

more a locative form -- it appears otherwise as a comitative/instrumental -- Lacroix, 1963: 46, S1) appears so to differ from don -- Lacroix, 1963: 47-8. I merely claim here that the progressive forms I have surveyed do have a notional core in common, such that they all predicate of a particular event that it is in existence (in progress) at a particular point of time (or points within a period, in the case of imperfects). However, before carrying further our analysis of progressives (and imperfects), let us proceed with the consideration of markers of other aspects in various languages.

I shall look next at those aspectual markers which present an event as occurring at or since some (unspecified) point in the past and as having some 'present relevance': the primary orientation is 'present'. Thus, as Jespersen observes (1931: chs. IV & V), the English perfect rejects, as 'a kind of present tense', 'such subjuncts as yesterday, last night, the other day, on the first of January, ...' -- i.e. those involving simple reference to a point in the past. This is not to deny that in many languages (Rumanian, German, presumably Fulani -- Taylor, 1953: ch.12, § 12) the perfect has come to be used as a (non-imperfect) past tense as well as the perfect aspect of the present, and thus does appear with such 'subjuncts'. (On this development in a number of Indo-European languages, see Meillet, 1921; Zieglschmid, 1930a (condensed as 1930b).) It must indeed be part of our aim to provide an account which will explain the naturalness of such a development.

The perfect is one kind of retrospective aspect. Another aspectual relation involves the notion of 'recentness' -- as conveyed



in the French periphrasis with venir de. In view of its typical manifestation (and of the underlying representation I shall propose below), I shall refer to this as the ablative retrospective aspect. Just as perfects tend to become 'simple pasts', so ablative retrospectives tend to become perfects (and thus sometimes 'simple pasts'). I shall accordingly survey all the markers of retrospective aspect together in what follows.

There are some languages in which the expression of the perfect is in terms of a (temporal) locational particle plus a 'verbal noun'. So Scottish Gaelic:

(337) Tha mi air mo bhualadh ('I am after (air) my striking')

(The temporal particle is identical to the preposition for 'on', but has a distinct historical source.) Compare the Irish Tá Seán tár éis an coinín a mharu ('John is after (tár éis) killing the rabbit'), with a superficially complex prepositional form. There is also a distinct ablative retrospective in Scottish Gaelic, and Welsh (with newydd vs. wedi) --- Jones, 1970: 102-3.

In other languages there are markers of the perfect which appear to have an ablative source. In Basque, one form of the 'indefinite perfect' (i.e. where the 'indirect object' is not expressed) involves the partitive inflexion. Thus (using examples from Gèze, 1875: 197, 199):

(338) a. Eskenturic dut ('I have offered (it)')

b. Helturic niz ('I have arrived')

The partitive (Geze's 'dubitatif') inflexion has been added to the 'participial' stems (see below) eskentu and heltu. There is reason for thinking that the similarity in 'shape' between the partitive

and the ablative in Basque is not fortuitous. Certainly, markers of the partitive in other languages -- e.g. Finnish (Eliot, 1890: 134), French -- appear to have their historical source in an (adverbial) ablative inflexion or particle: I shall argue below (in ch. 8) that the partitive is indeed simply an adnominal ablative. In the central dialect of Tibet it is the ablative itself (-nā) of the 'verbal noun' which is used with the copula in forming the perfect (Grierson, 1909: 75):

(339) Dul-nā yō<sup>ō</sup> ('I have walked')

(Grierson speculates elsewhere (1904a: 96) that the kā marker of the 'past' in Ahom (Tai group) may be in origin an ablative (cf. the Shan dative/ablative kā).)

In some languages there occurs as marker of the perfect a distinctive 'auxiliary verb' (at least in (some subset including most) transitive sentences) together with a particular form of the 'main verb'). Thus, in English, we find John has eaten the rabbit, with have (rather than be) and -en suffixed to the verb. In other languages 'be' occurs (rather than 'have') with many (underlying) intransitive verbs, though the form of the 'main verb' is the same. This form of the verb is also found in passive sentences (The rabbit was eaten), and there are in some languages further phenomena (concerning concord) suggesting a relation between such perfects and the passive. We must return to such questions below. It is also relevant to note at this point the existence of transitive perfects (in languages which lack 'have') which are superficially even more akin to passives. I am thinking of the Armenian etc. examples discussed by Benveniste (1952) (and e.g. Lohmann, 1937) in which the

NP which otherwise would become the object appears as subject and the 'would-be subject' appears in a 'genitive/dative' phrase, as in (340):

(340) nora ē gorceal ('eius est factum')

One form of the perfect (with transitive verbs) in Manx (which also lacks 'have') involves such a construction (with the preposition ec ('at')) -- Kneen, 1931: 148). These 'passive-like' characteristics are crucial to an understanding of the genesis of have-perfects, a topic we shall touch on briefly below but which is explored more fully in Anderson, forthcoming b.

Observe at this point also that the derivation of have elsewhere (i.e. in non-perfect instances) would seem to involve subjectivization of a locative phrase, and that the presence of a have structure (with empty Ns) above a locational predication permits raising of a locative phrase (in accordance with the X-principle) into subject position (as discussed in the previous chapter). The subject in sentences containing 'have' (and its equivalents) as a main verb' has its source (diachronically and synchronically) in a locative phrase of some sort. Such considerations are directly relevant to our present concerns, in that it has also been claimed (Lyons, 1968a: § 8.4.6; cf. too Lyons, 1967: 394-5; 1968b: 498-9) that 'it is the same principle which explains both the diachronic development of "perfect with have" and the "possessive have". In both cases, the have-transformation became obligatory, its original function being to bring the "person interested" (not necessarily the "agent") into surface position in surface structure.' (See too Meillet, 1924; Kurylowicz, 1931; Vendryes, 1937; van Ginneken, 1939; Benveniste, 1960, 1968; Allen 1964.) A single principle underlies both the

development from Est mihi liber to Habeo librum and that from Opus mihi est factum to Habeo factum opus. We have already observed the existence of a perfect of the former kind (with a 'dative/genitive' of interest) in Armenian (cf. 340). Once again there is a parallel 'possessive' construction (Benveniste, 1952): compare with (340) a sentence like nora ē handerj ('eius est vestimentum'). (See too once more Lohmann, 1937). Requirements of naturalness constrain us to investigate to what extent such a principle as is formulated by Lyons is relevant synchronically in the case of 'auxiliary have'. In this connexion, our observations concerning the 'passive-like' qualities of perfect 'have' constructions will be apposite, as will their limitation in many languages principally to (non-reflexive) transitive verbs.

Certainly, the genesis of the 'have' perfect appears to be in general with transitives. Further, Benveniste (1968: § I), for instance, has indicated an even more restricted source for the Latin habeo-perfect. In discussing the development of the periphrasis that underlies the analytic perfect, he states that originally the 'main verb' in such periphrases 'must denote a "sensory-intellective" process inherent in the subject' (87). If this is indeed the case, then it is of considerable interest for the investigation of the history of analytic perfect -- which, as I have observed, is considered in somewhat more detail elsewhere (Anderson, forthcoming b). These are verbs which (in active sentences) take an abstract locative (dative) subject, and are most susceptible to a 'shift' of their perfect form to become a marker of 'present state': so novi etc.

English (and similar) perfects are characterized by a distinctive



inflexion (-ed / -en in English) for the 'main verb', an inflexion which is 'adjectival' rather than 'nominal' (as has been argued for -ing). It marks adjectives derived (morphologically, at least) not only from verbs (amazed) but also from noun phrases (long-nosed). Somewhat similarly (in this respect), in Fulani the -i suffix that characterizes the perfect is identical to that added to an 'adjective' when predicative:

- (341) a. Mi windi ('I have written')  
 b. Hendu fewi ('The wind is cold')

(Taylor, 1953: ch.7; ch.12, § 12.) Compare too, on Ewe, Westermann, 1930: § 122. Darrigol (1829: 106) argues that the simple form of the 'main verb' used in the Basque perfect is adjectival: it certainly appears not to be an inflected form of the 'infinitive' (as is the imperfect). (It is to this stem that a partitive inflexion is added to form the alternative representation for the indefinite perfect discussed above.) In French, which requires gender agreement between predicative adjective and subject NP, we find that after être the 'perfect participle' also agrees with the subject of the sentence, once more suggesting an adjectival status for the 'main verb':

- (342) a. Elle est petite  
 b. Elle est arrivée

Notice, however, that this is not the case in transitive sentences, and that in relative clauses containing a transitive verb agreement is rather with the object, if it precedes:

- (343) La chemise qu'il a achetée

(Cf. the Old English (main clause) usage noted in, for instance, Mustanoja, 1960: 500.) This is a manifestation of the 'passive-like'

characteristics of 'perfect have' constructions. It suggests that the presence of avoir 'disrupts' a structure that would otherwise appear as a 'dative of interest' construction (like (340) by once more bringing the underlying agent into subject position. We can explain <sup>the</sup> agreement shown in (343) on the basis of their being a 'dative of interest' construction involved at the appropriate point in the derivation. As I have suggested, we shall return to these characteristics of 'have perfects' below. More relevant to our present stage in the discussion is simply the observation of the 'adjective-like' features of the 'perfect participle'.

This sort of morphological relationship will have to be explained by any account of aspect. Clearly, there is an underlying notional relationship. The perfect 'connects a past occurrence with the present state as having results or consequences bearing on the present moment' (Jespersen, 1931: 60 -- see too Zieglschmid, 1930b: 156-7; Svartvik, 1966: 86; Bach, 1967: 474; Traugott & Waterhouse, 1969: 299-300; Huddleston, 1969: § 4). Some adjectival forms in the present tense express a 'present state'. Thus, we have pairs like the following in which the former is implied by the latter:

- (344) a. John is tired  
b. The walk has tired John

The 'present state' expressed in (344.a) is (given appropriate identities) the result of the 'past occurrence' also incorporated in (b). Our account of the semantics of perfect aspect should explicate the viability of such implicational relationships.

Observe too that those adjectives formed by suffixing -ed to NPs express 'possession' of the characteristics denoted by the NP,

which possession is often 'a result of some sort of acquiring' (Hirtle, 1970: 25 -- see too Jespersen, 1913: § 15.3). Again, there is a parallelism between the expression of possession and acquisition and the representation of the semantic distinctions associated with perfect aspect.

Finally, on this topic notice that the object in the (b) instance in (344) is the subject in (344.a). And this brings us back once more to the passive. Kurylowicz (1964: 56-67), for instance, notes the ambiguity (between perfect passive and present state) of laudatus est. In English, the be ... -ed form is similarly ambiguous, but in this case between non-perfect passive and present state. As Jespersen (1931: § 8.1(2)) observes a sentence like (345):

(345) His bills are paid

'may mean two things, either the present action as in "his bills are paid regularly every week" = "he pays", or the (present) result of a past action as in "His bills are paid, so he owes nothing now" = "he has paid"'. In other languages still there are no such ambiguities. But there does appear to be some intimate connexion between passive, perfect and 'adjectives of state'. Some grammarians (cf. e.g. Gering, 1874) have indeed been inclined to label the 'participles' in -ing and -ed (and their equivalents) as 'active' and 'passive', respectively. We shall be examining what justification there might be for this below, as we attempt to allow for the variety of phenomena relating to perfect aspect that we have briefly surveyed.

We must conclude by noting a language in which the notional character we have ascribed to perfects seems to me particularly transparent. Observe that once again Venda examples like the pluperfect

in (346) (Doke, 1954: 172):

(346) Ndo-vha ndo-vhona ('I-was I-saw')

provide evidence that the perfect involves a complex predication; but, further, they embody superficially markers of the dual time reference proposed as characteristic of the perfect.

Let us try to sum up. The notional character(s) and the subsequent derivation of retrospectives must be captured in such a way as to explicate not only the Venda phenomena just alluded to but also the occurrence of (the copula plus) certain case particles ('after', 'from', partitive) with the main verb, the relationships with 'adjectives of state', with 'datives of interest' and 'passives', the use of 'have' constructions, the limitation on associated temporals, and the tendency to develop into a past tense. We should note too this juncture the use as perfect markers of forms like jei in Hallam and other languages of the Kuki-Chin group, forms which (as in other languages) derive from an element meaning 'finish' (Grierson, 1904b: particularly 196). Consider also the use in Gilbertese of tia, 'be finished' (Cowell, 1951: 8). Whatever the status of such forms, perfects and terminative aspect clearly have an affinity which we must provide for. Some of the relationships I have noted may be of diachronic rather than synchronic significance. But this remains to be established. Moreover, even if this is indeed the case, the historical developments and relationships should nevertheless be seen to follow in a natural way from the characterization proposed for perfects.

Those examples of prospective aspect that I have encountered and can identify involve once again directional (in this case allative --



cf. the ablative perfect) case particles. Consider Egyptian:  
 (347) *iw's r mst wdf* ('She will give birth late')  
 (Gardiner, 1927: lesson XI; § 332), in which the marker of the  
 prospective is *r*, which is elsewhere an allative ('to, towards')  
 particle. Compare the use of the 'dative' *ti* in *Āhom* (Grierson,  
 1904a: 90, 98). In Basque (Darrigol, 1829: 106), there is a forma-  
 tion involving a 'genitival' inflexion added to the 'perfect' stem;  
 this 'genitive' is, however, historically a 'dative' (allative).  
 In Chiru (Kuki-Chin group), we find *rang/rang* ('for') -- and similar  
 forms in related languages -- used as a suffix of the 'future'  
 (Grierson, 1904b: 229). Sometimes too we find a non-directional  
 locative particle (as perhaps *ga* in Manipuri -- Grierson, 1904b: 29)  
 or simply the verb substantive, as in Kanāw<sup>2</sup>ri (Western Nepal) *tong-*  
*tog* ('Strike am-I') -- Grierson, 1909: 436. Compare too the Irish  
*Tá Seán leis an gcoinín a mharu* ('John is about to kill the rabbit'  
 -- *leis* = 'about his', 'for his', /'with his'). English has a  
 periphrasis with *about to*, which is presumably derived from a case  
 phrase within a case phrase: cf. *on the point of* (and Middle English  
*in/o point to* and the like -- Mustanoja, 1960: 495). There are  
 similar phenomena in Hebrew, Arabic, etc. (Cohen, 1924: pt.4, ch.2).  
 We shall have occasion to return to the complex character of some of  
 the particles for this and other aspects below.

A further possibility for the expression of prospective aspect  
 involves not (merely) an allative particle but (what is historically)  
 a verb of motion. So the Tonga (Collins, 1962: 40) and Zulu  
 (Crout, 1859: § 210.1) examples in (26.1) and (26.2) respectively:

- (348) 1. a. nya kusika ('He goes arrive')  
           b. uzi kusika ('He comes arrive')  
       2. a. ngi ya ku tanda ('I go to love')  
           b. ngi za ku tanda ('I come to love')

Cf. English be going to and French aller + infinitive. (We have already noted French venir de + infinitive as a marker of (ablative) retrospective aspect).

In a fashion parallel to the development of perfects, such prospective markers tend to assume the status of a 'future (or predictive) tense', in permitting, in particular, the co-occurrence of point-of-time adverbials. Other markers of 'futurity' (or at least 'prediction' -- cf. Boyd & Thorne, 1969: 62-5; Anderson, 1971b) are (as in most of the Germanic languages, or Thai, or Japanese, or Sogdian, or Rumanian, or Modern Greek) 'modal' in character. (For a concise survey of 'modal' and other markers of the 'future' in the Indo-European languages, see Hadley, 1873). Even 'predictive' expressions apparently formed from components that are not in themselves specifically 'modal' (as English is to/has to) tend to incorporate 'modal' notions. This is presumably related to the asymmetry between the retrospective and the prospective. In retrospective expressions we are concerned with a 'past occurrence' which has 'present consequences'; in prospective predications, there is a future occurrence or state which is the result of the present state. It is the various 'subjective' factors in this present state and their relationship to the (non-)occurrence of the future (or hypothetical) event that are reflected in modal predictions. Since this situation (involving modalities) introduces all sorts of considerations outside

the principal area under discussion, I shall in what follows limit my attention to aspectual markers like about to etc, with their element of imminence and rejection of point-of-time adverbials.

#### 7.4 Further informal remarks on tense and aspect

At this point we can perhaps formulate in an informal way a distinction that has been implicit throughout the discussion in § 7.3, and involves indeed a somewhat traditional view. This will initiate a review of some of the (particularly notional) relationships that must be taken account of in our proposals for aspect. I have termed the various constructions and elements that we have been looking at 'markers of aspect' but I also claimed that some of them (markers of the retrospective and prospective) could become 'tense markers'. And this is revealed by their compatibility with non-present point-of-time phrases like last Saturday, tomorrow, a year ago. Compare the 'have' constructions in English and French:

- (349) a. Je l'ai vu hier  
b. \*I have seen him yesterday

In English, the use of the perfect is not allowed 'if a definite point in the past is meant, whether this is expressly mentioned or not' (Jespersen, 1924: 270). However, in French there is no such restriction on the use of a form that is historically a perfect. The French 'have' construction can mark either perfect aspect (of the present) or past tense. It is precisely the presence or absence of such a restriction that (in the case of prospectives/ futures and retrospectives/ pasts) correlates with the distinction I want to draw

between 'markers of aspect' and 'markers of tense'.

Aspect, I suggest, is concerned with the relation of an event or state to a particular reference point: it is located before (retrospective), after (prospective), around (progressive) or simply at (aorist) a particular point in time. There are refinements necessary to this simple statement, some of which we have touched on already; and we shall return to this question in a moment. 'Tense markers', on the other hand, as we have seen, combine with temporal adverbials in establishing the reference points ('axes of orientation' -- Bull, 1963); they locate in time a point with respect to which events or states can be located. In this sense, the aspects are 'relative' or 'secondary' tenses (cf. e.g. Brunsendorff, 1930).

In § 7.3 we differentiated between ablative and perfect retrospective. Jespersen (1924: 271-2; cf. 1931: ch.IV) further distinguishes between the English perfect as retrospective present and as inclusive present:

(350) The Perfect, which is composed by means of the present of an auxiliary, is itself a kind of present tense, and serves to connect the present with the past. This is done in two ways: first the perfect is a retrospective present, which looks upon the present state as a result of what has happened in the past) and second the perfect is an inclusive present, which speaks of a state that is continued from the past into the present time.

The examples in (351) are intended to illustrate (how I understand)



this distinction:

- (351) a. Bernie has arrived  
 b. Bernie has lived there since 1963

Thus far we have taken note only of the type of perfect illustrated by (351.a). Examples like (b) suggest a rather different kind of underlying representation in which specific time reference is permitted. However, before proceeding to an examination of the character of the appropriate representations, a number of further observations associated with this distinction should be made.

The inclusive perfect is typical of verbs that are locational but non-directional, whether the locative is subjectivized (know) or not (live). Apparent examples with (for example) 'achievement' directional verbs (i.e. with nominativized loc) like arrive (like Bernie has arrived since you left) involve a point-of time reference to which the since... phrase is subordinate ('...at some point in the period since...'). Further, the greater naturalness of I have been travelling since Tuesday as compared with I have travelled since Tuesday tends to support an analysis of progressives as (non-directional) locational constructions. Notice now that if the marker of the non-inclusive perfect (I avoid Jespersen's 'retrospective' to prevent confusion with the use I have made of the term) is also a marker of the past tense (as in Latin, German, French, etc), then the inclusive function is performed by the non-past-tense form of the verb. Compare Jespersen's (1924: 272) examples:

- (352) a. I have known him for two years  
 b. Ich kenne ihn seit zwei Jahren

c. Je le connais depuis deux ans

These examples also illustrate that inclusive temporal adverbials may be either scalar tensors (Bull, 1963: 14-5), as for two years, or calendar or point tensors, as since 1963. Even in English the 'simple present' of such locational verbs is found with certain adverbs otherwise associated with perfects, as in I know that already (cf. Bernie has already left).

The non-inclusive perfect can emphasise either the present or the past references that we have associated with it. In (351.a) normally the implication of a 'present result' is clearly uppermost, whereas in an example like (353):

(353) Bernie has visited Portugal

the 'pastness' of the event is relatively more important than in (28.a). (Cf. R. Lakoff 1970: § 4.) This is in part determined by the 'inherent' aspectual properties of the 'main verb', but 'pastness' can be emphasized by the occurrence of an adverbial like that in (354):

(354) He has sometimes arrived (on time)

(Cf. He has arrived (on time).) However, as we have observed, the set of possible past-referring point-of-time adverbials that is compatible with the perfect is very restricted. Semantically, they are of the character 'at some (/any / no) past time(s)', and are, as pro-elements, freely deleteable. These considerations will be of some importance in our attempt to characterize the structure of perfects.

'Perfect' forms like the French or German are, as markers of the past tense, aorists rather than progressive. Further, the French or

Basque past progressive, as we have noted in § 7.2, can also be habitual: they are imperfects rather than simple progressives. In English, a sentence containing the past (and present) progressive denotes a habitual event only if there is present an adverbial which makes this explicit (He is/was always slicing salami), and even then there is an implicit point of reference; otherwise, in the past, used to or would is required if the distinction is to be marked by a verbal form. However, it may be that the distinction is in part relatively superficial, namely in consisting in the fact that the French imperfect permits the deletion of an underlying habitual pro-adverbial (whatever its source may be) where the English progressive does not. But also perhaps we should associate with past habitual sentences in French the requirement that they normally be imperfect. In English, both the progressive and the simple form in the past depend on the indication of an adverbial for a habitual interpretation, but the 'unmarked' form is the simple past. Whatever underlies the difference between English and French in this respect (see 7.6), the result is that the verb form used for the 'habitual past' is in both instances the superficially less complex ('synthetic' rather than 'analytic').

2 in/ In French, there is no 'present' progressive; and the 'present' it is the simple form in both French and English that is 'habitual' (even in the absence of an appropriate adverbial). This imbalance between the unmarked possibilities for 'present' ('habitual') and 'past' ('aorist') is perhaps a consequence of the relationship between the events referred to and the moment of utterance; aorist presents are limited to performative (aspect of 'Koinzidenz' --

Koschmieder, 1935) or commentative (He shoots. - It's a goal.) sentences. However, notice that in Basque, there is for the 'present', as for the 'past', no simple form: for most verbs, there exists only the construction involving the locative of the verbal noun + da / du. And, of course, in a number of languages the 'habitual character of a predication can be emphasized by the presence of say, an affix like -ya-wē in the Western Nāgā dialect Angāmi (Grierson, 1903: 212). We shall return below to a reconsideration of these distinctions in the light of the characterizations of the various aspects that will be proposed.

I note finally in this review of (particularly notional) relationships and distinctions relevant to our account of aspect the fact that, in most of the languages I have looked at, the 'present habitual' form is also used for 'timeless' statements (Sugar dissolves in water and the like), as opposed to the merely habitual (Fred works in Newcastle). However, in Persian, <sup>and</sup> ~~the~~ Mongolian for instance, there appears to be a morphological distinction between the 'gnomic present' and the '(continuous) present' (Platts & Ranking, 1911: 84-6; on Mongolian, cf. Grønbech & Krueger, 1955). This distinction is not directly relevant to our main theme, but for the fact that distinctive (i.e. non-conventional) progressive and perfect aspect seem to be excluded in 'gnomic' utterances. Such a consideration is important for our characterization of these aspects.

Before we proceed to a more detailed consideration of Darrigol's hypothesis, there is a further relevant distinction of a rather different kind that demands our attention. This concerns the status of auxiliary constructions like English be...-ing compared with phrases like French être en train de..... However this



difference is to be characterized formally in more superficial representations (we shall return to this question below), there appears to be associated with the distinction a difference in systematic semantic status. Namely, in languages which lack an auxiliary construction, the simple form (where one exists) of the verb can be used in circumstances in which the auxiliary progressive form would be required in a language like English: cf. He is coming / Il vient. The existence of the periphrasis in French does not exclude the present simple form here. The latter is appropriate over the whole semantic range covered by the English present progressive and simple forms; the former seems to be reserved for cases of particular emphasis, and is also more restricted in other ways.

I am uncertain how generally this kind of characterization of the auxiliary / periphrasis distinction applies. I shall try, however, to take some account of it in (in particular) the account of progressives proposed below.

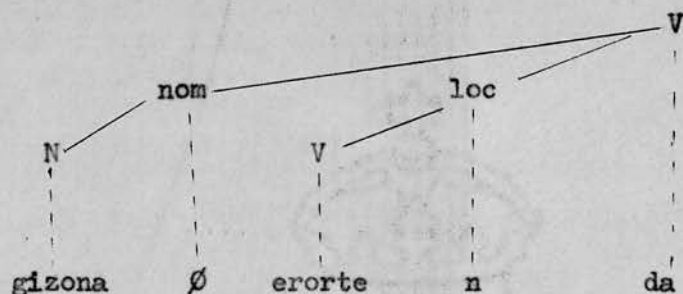
#### 7.5 Darrigol's hypothesis generalized

I want now to attempt to provide a characterization of Darrigol's proposal concerning the Basque verb, in a way that will provide for as wide a range as possible of the other notional and syntactico-morphological phenomena we have briefly reviewed in the preceding two sections. Let us consider first of all progressive constructions.

Darrigol claimed that in forms like gizona erorten da ('the man is falling') we have a verbal noun in the locative case plus the third person singular of (the present of) the verb substantive (his

subsequent analysis of this verb need not concern us here) -- i.e. a structure that we might represent as in (355). (I ignore here for the moment 'tense' distinctions, and the question of sequence, which latter is irrelevant to the discussion in the present chapter.)

(355)



Concord with the N dependent on nom is reflected in the shape of the verb (da). Nom in general in Basque has zero representation. The form of the main verb is the 'infinitive', or verbal noun (not the plain stem, eror). We might allow for this as follows. Suppose that N and V are, like the functional elements (cf. ch.6), abbreviations for complex symbols (segments), namely

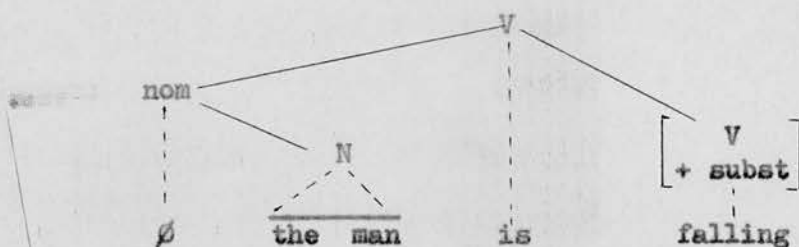
- predicative	and
+ substantive	

$\begin{bmatrix} + \text{pred} \\ - \text{subst} \end{bmatrix}$ , respectively. Nominalization then involves the addition of a  $\begin{bmatrix} + \text{subst} \end{bmatrix}$  feature to a segment that is  $\begin{bmatrix} - \text{subst} \end{bmatrix}$ .

I assume the shape of the verb stem in (355) is a reflexion of such nominalization. We shall have reason to revise this interpretation in what follows, but it will serve the purpose of the immediate discussion.

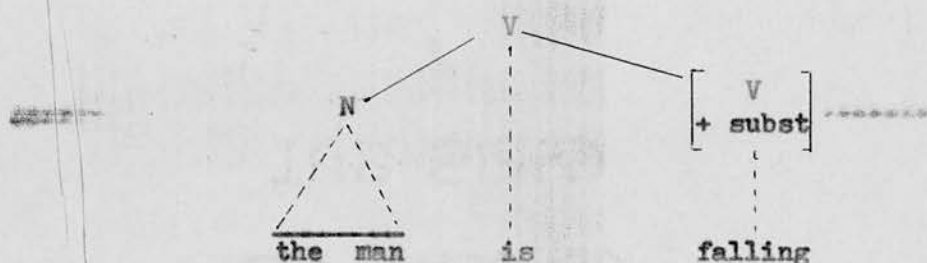
The English progressive is similar, with the addition of some rule removing loc (the form of which we shall return to), resulting in (356):

(356)



(where  $V = [+ \text{pred}]$ ). With the removal of the subject case node we get (357):

(357)



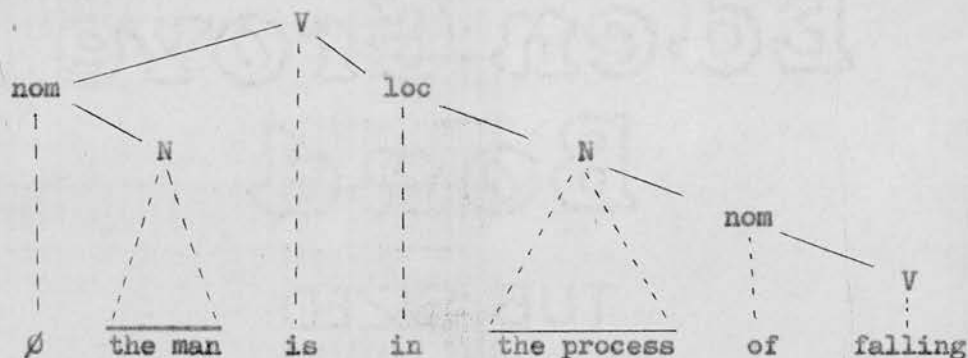
(Such an upper V is in English by definition 'auxiliary'.) So too with the analogous constructions in Swahili, Uzbek, Kolren, Hausa etc. cited above (in § 7.2) in which the progressive involves a locative particle and / or a 'nominal' form of the verb

However, there are two features of the construction in other languages which are not provided for in such an account. In the first place, we find, superficially at least, in the Celtic languages, for instance, progressive structures in which there occurs a pronominal form dependent on the nominalized verb which is identical in reference with the subject of the sentence (cf. (329.b), (330)). Secondly, there are languages in which the 'main verb' is dependent not on a simple locative particle but on a locative phrase containing

an apparently nominal element. The first of these considerations will assume some importance in the elaboration of Darrigol's hypothesis proposed in the following section. The second will occupy our immediate attention.

We observed in § 7.2, then, that in certain languages a complex locative phrase governs the 'main verb', as in Margi ní v̄àr wì ('I in place run'). These are structurally perhaps more like periphrases such as English be in the process/ middle / course of... or French être en train de..., for which one might suggest the following structure (as appropriate at some point in their derivation):

(358)



(I assume the presence of the is rather superficial; the presence of the nom governing falling will be discussed below.)

On notional grounds, it seems not unreasonable to regard structures like (355) as reduced versions of (358), just as (356) and (357) are reductions of the former. The absence of a locative preposition follows from a convention whereby deleted Ns take their immediately governing case with them. Further, observe that those verbs in English that typically reject progressive aspect (know etc.) also do not appear as the lower V in structures like (358):

(359) a. \* Ursula is knowing the truth



- a. \* Ursula is in the process of knowing the truth

If progressive aspect involves an underlying representation of the form of (358), then we can relate these restrictions (on progressive aspect and the process-construction) to a single set of selectional constraints. Also, it is thus apparent that the upper predication is in both instances 'transparent' (cf. e.g. T.R. Anderson, 1968), in that it is the subject of the verb be, which is constrained by selectional restrictions associated with the lower verb:

- (360) a. \*Truth ate the pie  
b. \*Truth was eating the pie  
c. \*Truth was in the process of eating the pie

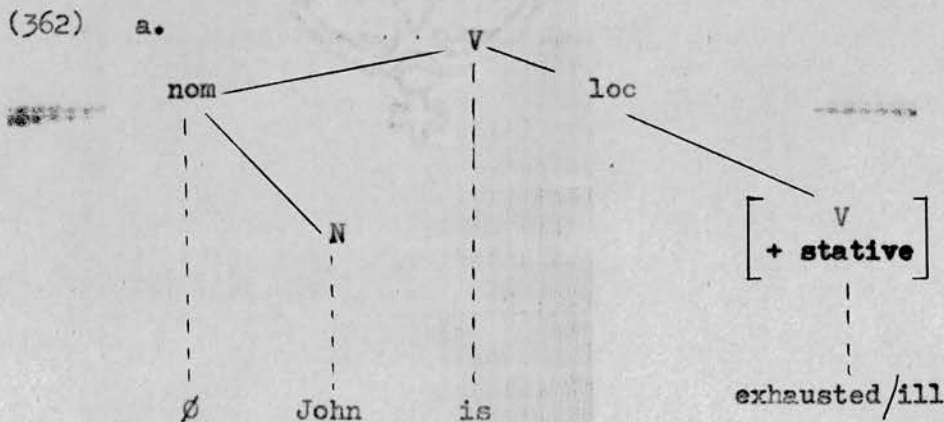
Accordingly, it cannot be argued that progressive aspect must involve a 'simple sentence' because of this relation between the subject and the 'main verb', since the same relation holds in a sentence (like (360.c)) that is clearly complex. Indeed, the problem of accounting for such 'transparency', together with the evidence from the Celtic (etc) languages, suggests an underlying representation for all these constructions in which the surface subject of the verb substantive is present in the dependent sentence. We shall (as I have indicated) develop this notion in § 7.6. Let us firstly, however, attempt to provide characterizations consistent with Darrigol's hypothesis for other aspectual (and related) structures.

Darrigol (1829) argues for an 'adjectival' interpretation of the 'main verb' in Basque perfects like erori da ('He has fallen'). And we noted above such a notional and representational connexion in other languages. Before considering the derivation of retrospectives, then, I would like to discuss the status of 'adjectives'.

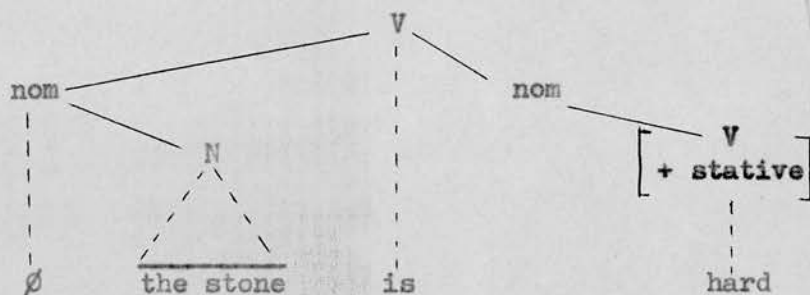
'Adjectives' which in English are composed of a verbal stem plus -ed are typically 'contingent' or 'transient'. They thus fall within the notional subset that (other things being equal) are marked with the essive case (rather than the nominative) in Finnish (Eliot, 1890: 123-4, 157):

- (361) a. Isäni on kipeänä ('My father is ill')  
 b. Kivi on kova ('The stone is hard')

The adjective in the a example is in the essive; the b example (which is 'absolute' or 'equative') is nominative. Compare the use of tá and is in Irish, and estar and sér in Spanish. Observe now that the Finnish essive is historically a simple locative, and indeed still has isolated spatial and temporal 'uses' (Eliot, 1890: 157): the use of the essive in (361.a) is a specialization of an originally general locative. Consider too the historical source of tá and estar. Similarly, a number of contingent adjectives in English have their origin in a locative phrase (cf. the progressives in (334)), as asleep, awake. In view of this, I propose that we can characterize the 'contingent' / 'absolute' distinction with respect to structures like those in (362):



b.

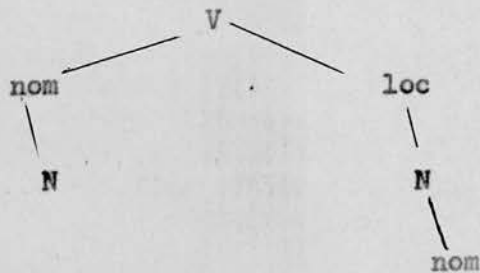


(We shall return in a moment to a consideration of some evidence for an elaboration of these structures.) Adjectives are thus regarded as a subclass of Vs characterized by the feature  $[+ \text{stative}]$ , which can be considered an instruction to the 'rules' forming underlying representations (whatever form they may take) that such a segment must (in English etc.) appear in a structure immediately governed by a loc or a nom in a sentence which contains otherwise only a (further) nom, apart from the verb substantive -- either static (be), or, with contingents, dynamic (become, etc -- see further 8.1). We shall consider the status of such instructions further below. We shall also find (in Ch.8) that such a distinction between equative and locative predications is relevant to the characterization of sentences involving predicative nominals.

There is also in English a 'fuller version' for John is exhausted (and many similar predications), namely John is in a state of exhaustion, with once again nominalization of the V (cf. the 'fuller' progressive). Thus, the former is also a reduction of a structure (in outline) like that in (358). Such a proposal is consonant with Ross's (1969b) arguments concerning 'adjectives as noun phrases'. This means that the representations for progressive aspect and contingent adjectives are (at some point in their respective

derivations) almost identical, i.e. as in (363):

(363)



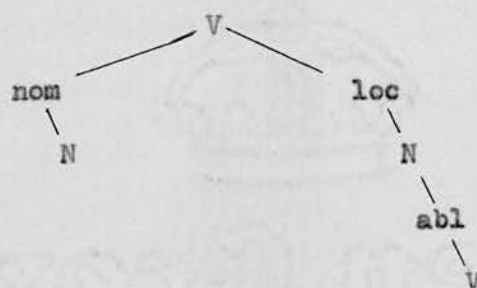
The difference consists in the character of the segment immediately governed by the adnominal nom  $\left[ \begin{smallmatrix} +pred \\ -stat \end{smallmatrix} \right]$ ,  $\left[ \begin{smallmatrix} +pred \\ +stat \end{smallmatrix} \right]$ . It is this specification which determines in English the item inserted (if any) with respect to the locative N (process / state) and the character of the nominalization (if any). In languages like Mikir in which progressives bear an 'adjective' suffix, nominalization is replaced by adjectivalization. We can also relate the absence of progressive aspect with most adjectives to the fact that the contingents are already provided with such a higher predication. The difference is that progressive aspect appears optionally above (non-stative) verbs, whereas the same kind of locative predication is obligatory above contingent adjectives: with verbs, the locational predication is a primary part of the underlying representation; with contingent adjectives, it is a secondary predication, in that it does not appear in the semantic structure as such but is introduced because of the occurrence there of a certain configuration.

Let us turn now to the ablative retrospective and the prospective. In those languages in which we find an overt 'casual' marker it is either complex (Welsh newydd, '(just) after') or ablative / partitive

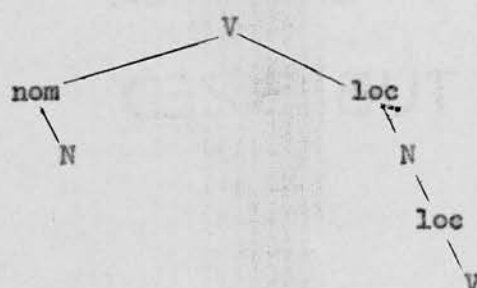


(Central Tibetan, Basque). Similarly, prospective aspect has complex markers like about to or (as in Egyptian) an allative/dative particle. We have observed that with regard to these aspects there is involved notionally a present state connected (immediately) with some past or future event. Such considerations suggest characterizations for the (ablative) retrospective and prospective of the form of (364.a) and (364.b), respectively:

(364) a.



b.



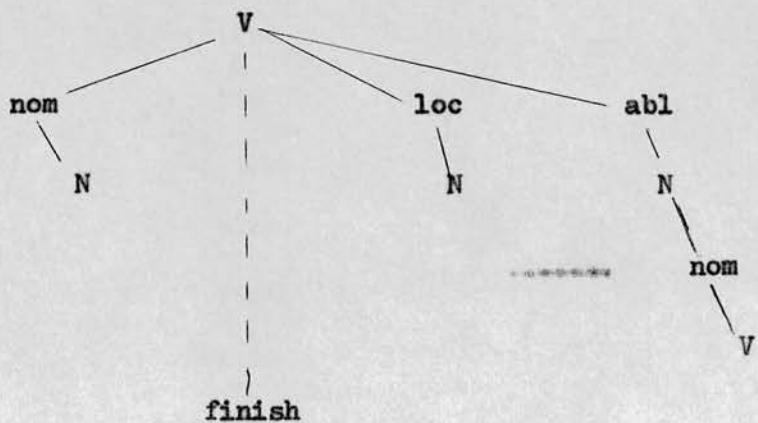
The representations for retrospective and prospective aspect thus differ from that for the progressive in terms of the adnominal case category, which is locational for them, simply nominative for it. It is these adnominal locational elements that are reflected in the presence in various languages of particles of the kind we have just noted (ablative vs. dative). The more complex forms (about to etc.)

are realizations of the whole locative phrase immediately dominated by the upper V: note that about is like asleep and a-going in its historical origin. In languages lacking progressive but with prospective aspect, the upper locative phrase can apparently be deleted, as in Kanāw<sup>a</sup> rī (§ 7.3).

Presumably, aspectual predications involving directional verbs ('go/come to' or 'come from' -- cf. Tonga (348) and French venir de) are directional rather than simply locative (as (358) or (364)). English be going to presupposes a progressive with below it a directional predication of this kind; but it is compatible with point-of-time adverbials and is therefore no longer simply a marker of aspect. This, and similar situations, raises a problem and we must attempt to resolve below, namely a discrepancy between the underlying representation suggested by some of the superficial structural properties (in this instance, aspectual) and that required by (in particular) the semantic restrictions (temporal).

The affinity between terminatives and retrospectives can perhaps similarly be related to the crucial presence of an ablative in the appropriate representation. At a certain point in derivation finish etc appear in a structure like that in (365):

(365)



i.e. a directional predication with the 'main verb' embedded under an ablative (cf. Anderson, forthcoming a: § 4). With begin, on the other hand, the 'main verb' is embedded beneath the locative N at this point in the derivation. We shall come back briefly to the characterization of such Aktionsarten below.

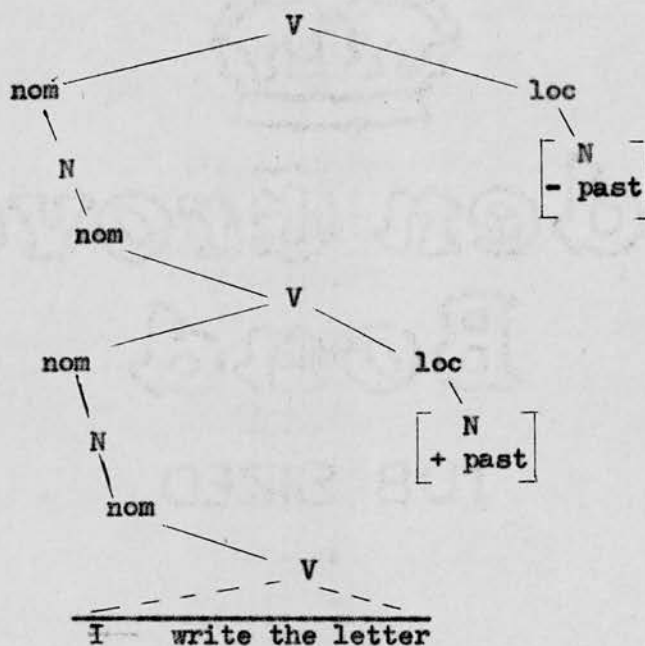
I shall try to indicate in ch. 8 that the same variety of adnominal case elements that has been proposed in our account of various aspectual constructions is also required by the grammar of adnominal case phrases with an immediately dependent N. Further examples of embedded sentences dependent in different ways on a higher 'lexical' element are provided by causatives (cf. make/cause to / prevent from). I think indeed that it can be argued that the 'lexical' elements N and V are always 'linked' by some functional element. What remains uncertain is whether an adnominal erg can be motivated (or whether all surface adnominal ergative phrases represent reductions from (dependency on) an adnominal V -- i.e. an embedded sentence); and, if it cannot, what is the explanation for this restriction.

There remains the perfect to consider. It stands apart from the other aspects in involving a second temporal reference (cf. e.g. Lyons, 1968a: § 7.5.8), though this if it is not 'inclusive' must be indefinite. In considering a source for perfects (which thus fall somewhat without the scope of Darrigol's hypothesis), we must therefore take as our starting point the derivation of tense, as outlined in § 7.1. There we argued that tense involves subjunction of the 'main verb' to a higher V in a temporal locative phrase combined with subjunction of the temporal locative to that same V. The

locative's  $[\pm \text{past}]$  specification is 'written out' morphologically in English.

Structures involving a perfect structure may be present or past, and in English this is marked as elsewhere by a tense suffix (has/had). However, the non-inclusive perfect also has a (further)  $[+ \text{past}]$  time reference which is indefinite and, as a PRO-element, may be deleted. Either the primary temporal locative or the secondary  $[+ \text{past}]$  one or both must be deleted. Thus, underlying perfects is a representation like that in (366):

(366)



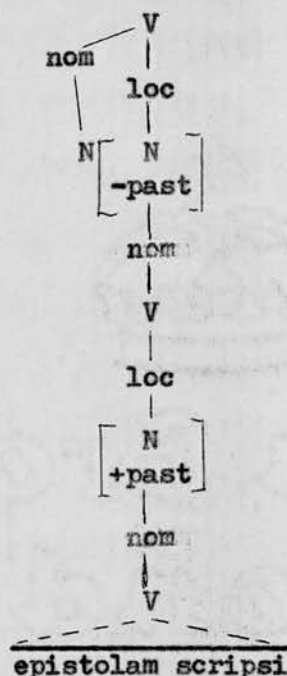
As an example from English with overt  $[+ \text{past}]$  locative consider Have you ever read that book?; and with over  $[- \text{past}]$  locative, I've read the book now.

In instances like the Venda pluperfect in (346), the higher tense V does not have the lower one subjoined to it, but remains disjoint, with its distinct tense marking. The less transparent



surface form in languages (like Latin) with a synthetic perfect is derived by full application of the various copying and subjoining operations outlined above, applied firstly to the second proposition and then to the topmost. The result is (if both original temporal locatives are deleted) as represented in (367):

(367)

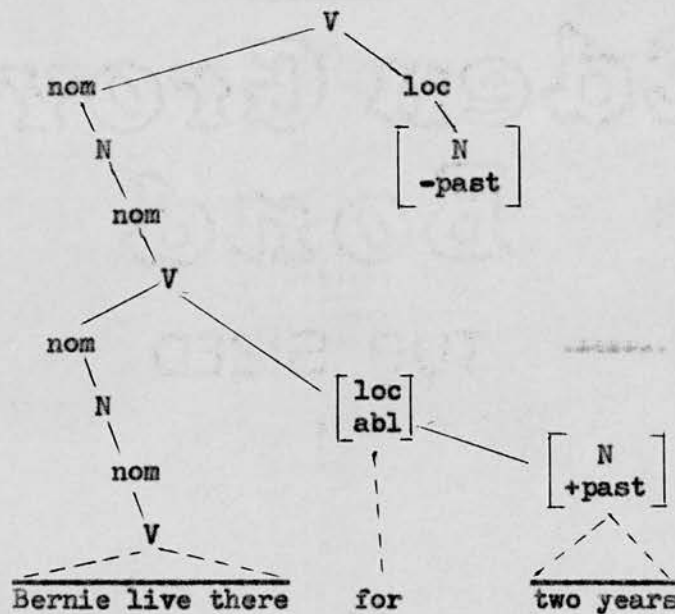


(The perfect suffix is a reflexion of the single  $[+ \text{past}]$  specification in the governing complex; we find the same suffix with the simple past tense. A double  $[+ \text{past}]$  specification entails the introduction of the pluperfect suffix). Clearly, the subsequent derivation for 'have' perfects is rather different from that eventuating in (367), and we shall return to this in § 7.6.

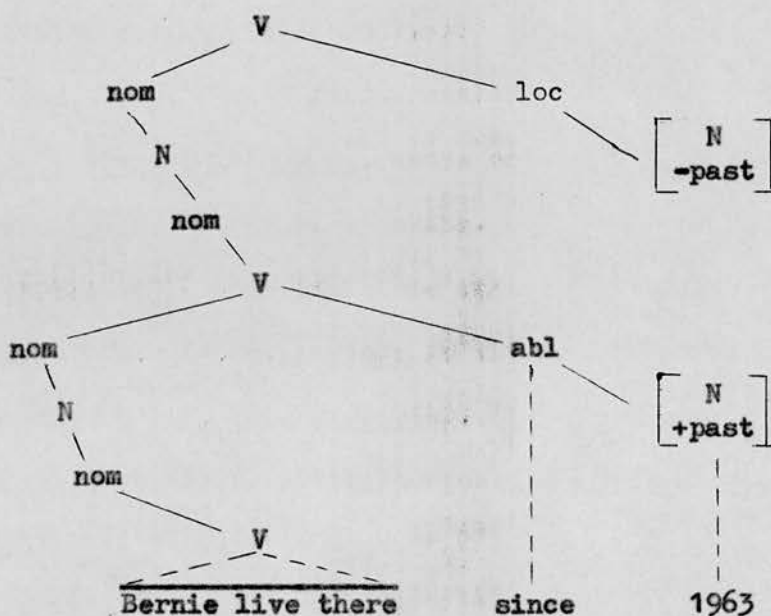
Now let us look at the inclusive perfect. We discussed the inclusive/non-inclusive distinction (and associated restrictions) in § 7.4, where the sentences in (351) were adduced in illustration. Inclusive perfects allow a definite past time reference, but only as

the marker of the beginning-point of a period extending up to the time of locution, as in (351.b): Bernie has lived there since 1963. Alternatively, we may find a scalar temporal like that in Bernie has lived there for two years, where once again the ending-point of the period is the moment of speaking. For as a spatial preposition is a complex  $\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$ ; it is the variant of through etc found with scalars (cf. § 4.9). Since is rather the temporal equivalent of a from-phrase (cf. French DEpuis). As underlying representations for these sentences I thus propose the structures abbreviated in (368):

(368) a.



b.



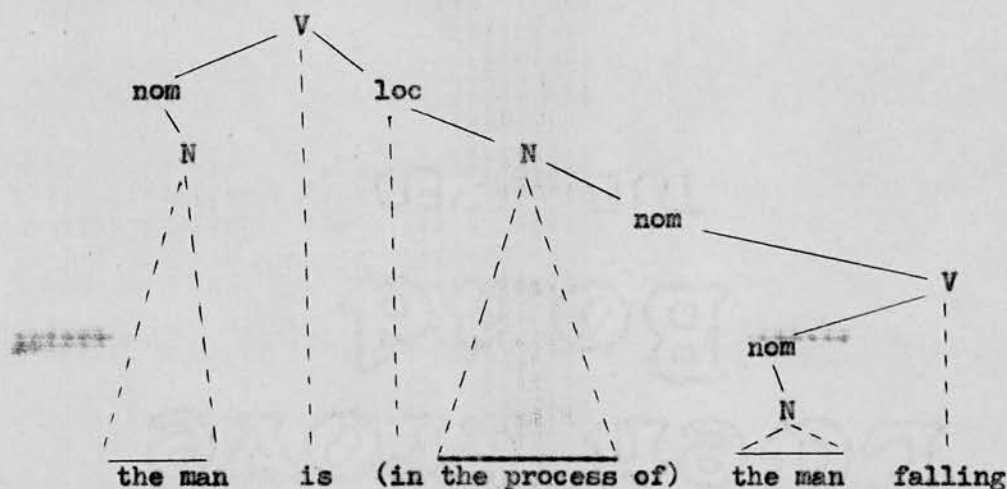
(Compare with (368.a) a sentence like He lived there for two years, in the source of which the topmost predication is lacking. I am uncertain as to whether one should propose that there is a PRO-locative (presumably  $[-\text{past}]$ ) also present in the middle predication in (368.b).) As we observed in § 3.3, in languages in which the past tense and non-inclusive perfect markers are non-distinct, such configurations as (368) (containing  $[\text{+past}]$  ablative temporals) do not require the perfect marker to be present. We find in such instances the simple present tense, in accordance with the specification for the highest predication.

#### 7.6 Darrigol's hypothesis revised

There are a number of phenomena not allowed for by the description of aspectual constructions offered in §§ 7.2 - 7.5, which was intended as a rather simplistic interpretation of Darrigol's hypothesis. In

particular, we have not examined the internal structure of the predication governed by the (nominalized) 'main verb'. Clearly, at some stage this contains (as subject) a NP identical in reference to the non-locative NP in the higher (aspectual) predication, and, as we have seen, there are languages in which (residues of) both NPs are retained superficially, as in the Celtic examples in (329) and (330) or those cited in (331) from Zulu. Thus, underlying the representations in (358) and (355) is a structure like that in (369):

(369)



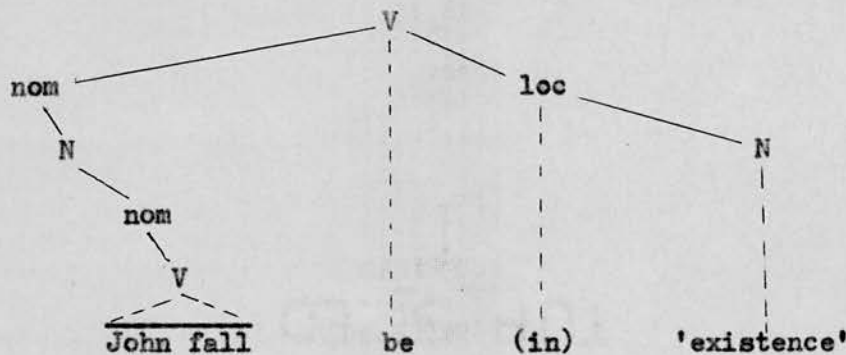
In many languages the lower the man must be deleted, but in, say, Gaelic, it may be pronominalized. (Somewhat similar analyses have recently been proposed with respect to English and Russian by Miller (1970, forthcoming) and Allan (1970), respectively.)

We must now consider the character of the locative phrase that we have proposed as governing (via a nom, loc or abl) the lower predication in the various aspectual constructions. It is obviously not simply spatial. Nor is it temporal: indeed be + temporal cannot normally be predicated of what Lyons (1968a: § 8.1.10) calls a 'first order nominal' like the man. However, this indeed raises the



question of whether the upper proposition in the semantic representation for such sentences involves any kind of predication of the man. What I propose is this. The locative phrase we are concerned with is in all these instances existential, and it is predicated of the lower proposition as a whole -- as indicated in (370):

(370)



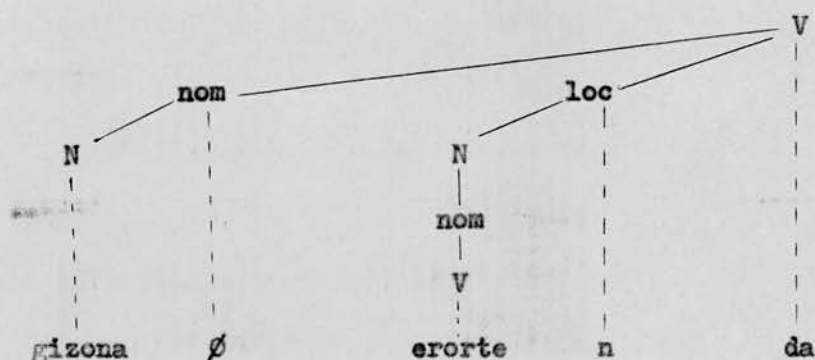
Existence is predicated of the lower proposition, but existence at a particular point of time; typically the point-of-time reference involves another event (if past), as in He was leaving when we arrived. We can thus associate with such aspectual predications the requirement of a higher point-of-time predication (cf. Anderson, forthcoming a: § XIV ); they are not gnomic (§ 7.4).

Similarly, 'contingent adjective' constructions involve a predication of existence, either at or for a certain time. For an adjectival verb, existence guaranteed at (or during) a certain time is a '(temporary) state'; for a full verb it is a '(temporary) process'. If existence-at-a-certain-time is predicated of a 'lexical' second order nominal, then the existential N may be realized in English as progress, as in The party is in progress. Thus, just as live and alive are the (temporally limited) existential predicates associated with animates (Lyons, 1968a: 349), so verbal aspects like the

progressive are in origin temporally limited existential predications of 'events'. Notice that this may account for the occurrence of progressive periphrases involving 'nouns of place' in Sofray etc (as noted in § 7.3).

The representation in (369) is derived from (370) by two operations. Firstly, the lower nominative phrase (containing the 'main proposition') is detached from the upper and attached to the locative N. Secondly, the upper nominative phrase, being once more empty (cf. the effect of abjunction), has the lower 'subject' copied on to it. The first process is presumably also involved in the derivation of in the habit of periphrasis in English. We have seen that in Manipurī there is apparently beside the kind of structure found in Egyptian etc an alternant in which the subject of the lower predication alone is attached to the locative particle: Tong-da-nā lai ('Riding-with he-is') vs. Ai-nā phū-rī ('With-me strike'). In English and the like the existential locative pro-N is subsequently deleted, taking with it, by convention, its immediately dominating case, loc: the result is a structure like (356), and (ultimately) (357). I presume a similar development for adjectival predications (and predicative nominals). In Basque, on the other hand, the lower V is perhaps merely subjoined to the locative N, as represented in (371):

(371)



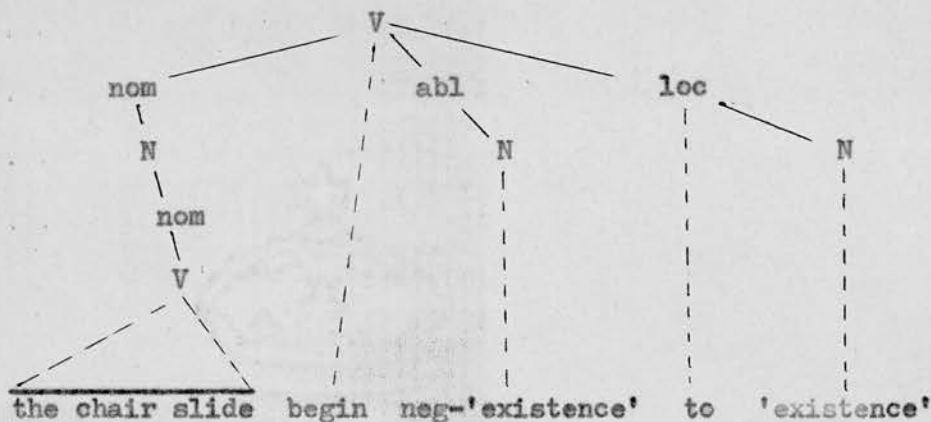
in that the locative case is retained but there is no overt indication of the dependent N. The same process may be involved in the derivation of English locative nominalizations like that in the subordinate clause in Passengers must not distract the driver's attention whilst the vehicle is in motion.

Notice finally in this section that forms like the Irish, Tá Seán tar éis an coinín a mharu ('John is after killing the rabbit' -- cf. too (337), if they are not extensions (to perfect status) of ablative retrospectives, may involve in their derivation the operation of the rule which shifts the lower predication in (370) and attaches it to the locative phrase in the upper predication, resulting in (369). In this instance the lower predication will be attached to a [+ past] locative rather than the existential in (370): i.e. tar éis etc would be realizations of the lower temporal locative phrase with perfect constructions in the derivation of which this particular operation is applicable. The occurrence of this operation rather than abjunction also means that the lowest V is not subjoined to the lower temporal V; and the latter appears superficially as Tá etc.

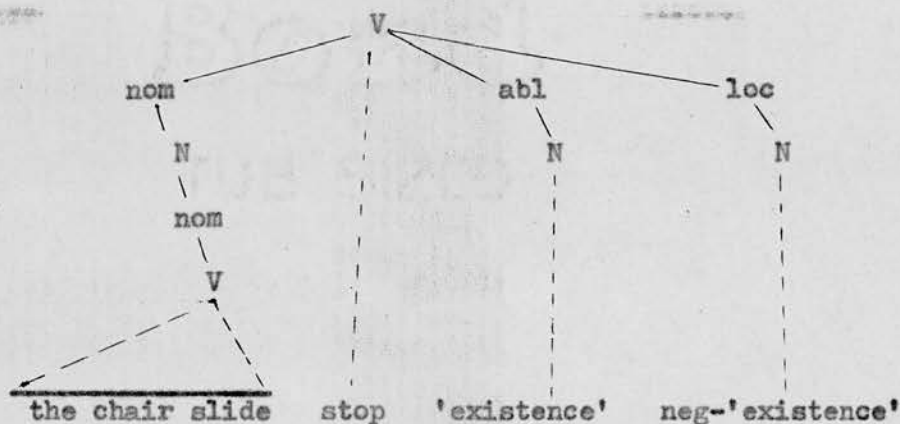
Clearly, a similar derivation is involved with the inceptive and

terminative Aktionsarten, marked by e.g. begin, start and stop, cease in English (see Anderson, forthcoming a). Underlying the sentences The chair began to slide and the chair stopped sliding (if we ignore tense) are, respectively, (371.a) and (371.b):

(371) a.



b.



I.e. these sentences are existential directional predications differing in the trajectory of the movement: into or out of existence. The rule which moves the lower V in (370) to under the 'existence' N (as in (369)) is again operative in both instances. With respect to (371.a) the lower V is thus attached to the locative; with (371.b) to the ablative (underlying cease from), though the marker



of this is usually absent in English (cf. prevent, etc).

With the intermediate term of the tripartition (continuative -- continue etc) there arises a problem similar to that we encountered with the intermediate causative allow. Namely, if as we would predict from the meaning of clauses containing continue, they are considered to involve a superordinate negative verb with (like stop) a positive existential N dependent on abl, we would expect the lower clause to be attached to this phrase.. However, continue takes to + 'infinitive' rather than (from +) gerund. With the causative we suggested an otherwise unmotivated polarity <sup>shift</sup> ~~slur~~ for abl. This may also be the case here; but in this instance there is a perhaps preferable alternative. This is to propose that the lower V is attached to the existential N that agrees with the higher V in polarity (Anderson forthcoming). With continue it is thus attached to the locative.

There are two major outstanding general questions which I would like to give some consideration to before returning to the perfect and the problems posed by the occurrence of the auxiliary 'have' in a number of languages. The first of these concerns the notion of auxiliary (cf. § 7.6), and the second the kind of distinction we drew above, between markers of aspect and (the extension of these to) markers of tense.

I have suggested that we can characterize auxiliary verbs in English as a V that comes in the course of its derivation to immediately govern another V, as in (357). It is uncertain how generally applicable such a characterization is. It is undoubtedly insufficiently general in this particular formulation. Say that

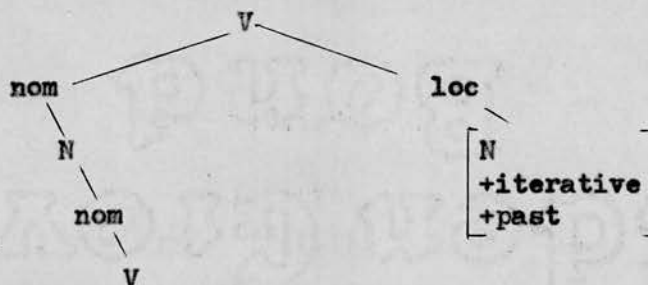
there is some cross-linguistic motivation for regarding the upper V in (371) as 'auxiliary' in Basque. Now this V at no point immediately governs another V (under the interpretation we have just proposed). This suggests that auxiliation may depend rather on some such notion as 'highest degree of reduction' for aspectual (etc) constructions. However that may be, we can associate (in some intuitively clear sense) with auxiliated structures, as compared with less reduced forms, less semantic and/or syntactic restriction; the relatively unreduced forms also impart some particular 'emphasis'. Observe, for instance, that the progressive in English is possible with a group of verbs that are excluded below the ...in the process of... periphrasis. I am referring to simple locative verbs like (non-dynamic) lie, stand, sit, etc, the restriction on which is illustrated in (372):

- (372) a. The pencil was lying on the bedroom floor  
 b. \*The pencil was in the process of lying on the bedroom floor

Similarly, the Basque 'present' is semantically less restricted than the periphrases with ...ai/da... ('be in the process of') and ...aitzen da... ('be in the habit of') in which da is not auxiliary to the 'main verb' -- it is an unmarked alternative to either (for discussion, see Anderson, in preparation b). In French, there is no present progressive or imperfect auxiliary (parallel to the perfect with être/avoir + 'past participle') equivalent to the unreduced ...être en train de..., thus, the (auxiliary-less) simple form appears in circumstances where in English the progressive is to be expected; but the past imperfect is less restricted than the en train de construction.

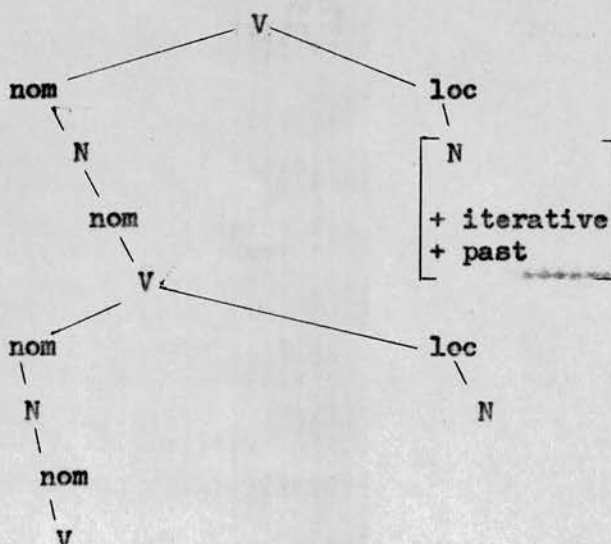
The French (past) imperfect and the Basque imperfect are also, as we have observed, less restricted than the English progressive. We must now turn to the distinction between such structurally similar auxiliary constructions in these and other languages. We have observed (in § 7.4) that imperfects, as opposed to progressives, can have a non-emphatic habitual interpretation, even in the absence of an iterative adverbial. I suggest that we can associate this with a requirement imposed by iterative temporal predication that the kind of predication we have proposed for progressives be introduced into the same sentence. That is, given an underlying configuration of the form of (373):

(373)



the introduction of a progressive predication is entailed in French, Basque and the like, as represented in (374):

(374)



Thus, the progressive is in such instances what I have described as a secondary predication: its presence is required by the occurrence of a particular subconfiguration; it is not itself a part of the semantic representation. In languages in which this happens, an underlying pro-temporal may be deleted. If the  $[+ \text{past}]$  temporal is  $[- \text{iterative}]$ , then the presence of the progressive involves a semantic selection, as in other languages. In French, the progressive, whether imperfect or not, occurs only below  $[+ \text{past}]$  temporals. In Basque, we find it with present, i.e.  $\begin{bmatrix} - \text{past} \\ - \text{future} \end{bmatrix}$ , temporals; indeed, its presence (as a secondary predication) is mandatory with any such temporal.

The effect of such developments is (historically) to render of an aspectual marker, a more general marker for present forms, as outlined in (375):

(375) progressive  $\longrightarrow$  imperfect  $\longrightarrow$  present

The second stage represents merely a further extension of the use of a secondary predication developed in the first stage. A similar progress is discernible with retrospectives:

(376) ablative retrospective  $\longrightarrow$  perfect  $\longrightarrow$  point past

The second stage in (376) also does not appear to involve necessarily the development of a secondary status for an originally aspectual predication, but rather (as in Latin) the extension of a marker for a sentence that is both present and past to a sentence that is simply  $[+ \text{past}]$ . However, the perfect is scarcely aspectual to begin with; nor do all perfects necessarily have their source in ablatives. The investigation of the universality of such trajectories of development and their motivation -- and indeed of



the correctness of my interpretation of their historical direction -- offers some fascinating prospects. But any proposal made at this time must be speculative in the extreme.

We are now in a position to consider the status of 'have' and 'be' perfects. It seems clear that such constructions involve once again the introduction of a secondary predication of some sort. That is, given an underlying configuration containing two adjacent temporal predications (the lower one being  $[+ \text{past}]$ ) there exists in certain languages a requirement that a predication of a certain type be introduced. I shall not here discuss the historical motivations for this, or the mechanism whereby such a requirement is introduced into the grammar: for some proposals, see Anderson forthcoming b: particularly <sup>SS</sup> 2-3; in preparation a. I want merely to consider the place of such constructions in the synchronic grammar of these languages.

Observe firstly that in a number of languages the 'have' perfect is associated primarily with (a subset of) transitive verbs, and that with certain (typically motional) intransitives we find rather a construction with 'be'. In English, the 'have' form has been extended to all verbs. In Finnish, on the other hand, 'be' is universal. Let us consider in the first place the 'be' construction.

Like the 'past participle' in passive or adjectival constructions, the verb in such perfects in, for instance, French 'agrees' with the subject in gender and number:

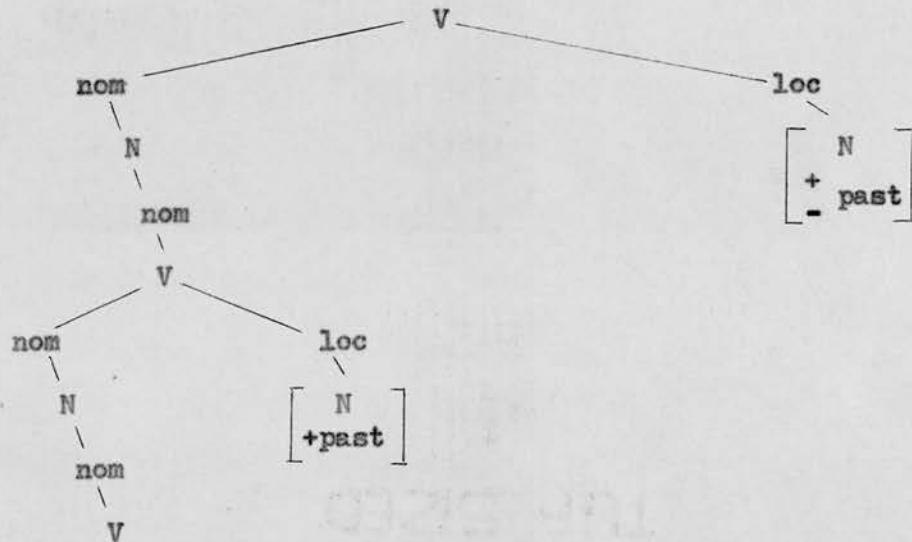
- (377) a. La porte est fermée  
b. Elle est partie

(Cf. Italian Essa è partita, etc.) This suggests that in such

languages there is associated with a configuration like that in

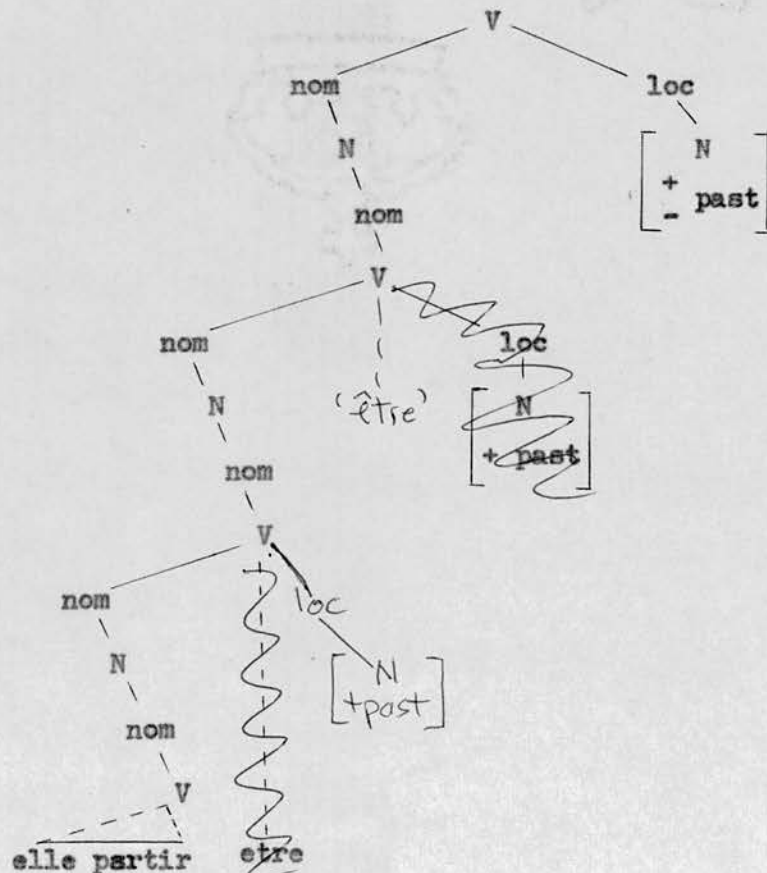
(378):

(378)



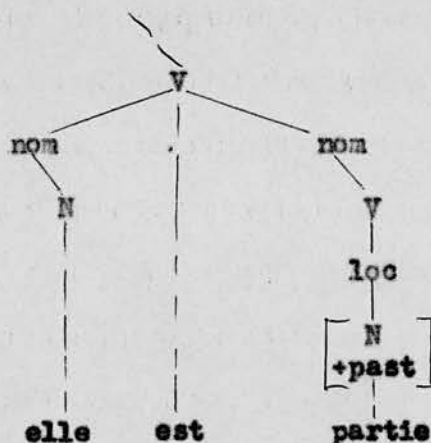
in which the lowest **V** is of the appropriate category, a requirement that a predication of (something like) the form of the <sup>second</sup> ~~third~~ highest in (379) be introduced (as a secondary predication):

(379)



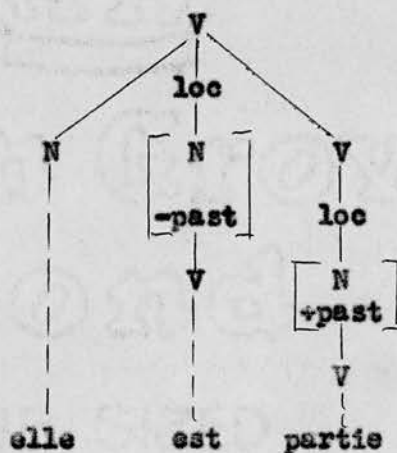
The lowest V will be abjoined from the governing N, and its subject then copied on to the empty N thus released (with deletion of the original); the V is then subjoined to its governor. After abjunction of the next lowest V and 'raising' of its subject, the resultant structure is as in (380):

(380)



The structure deriving from abjunction from the highest V, copying and then subjunction is as indicated in (381) (after pruning):

(381)



The concord operations are as for any 'adjectival' predication (cf. § 7.3). An alternative interpretation would be to regard the 'be' verb as the realization of one of the temporal Vs. We would however in this case have to exclude this V from the subjunction otherwise

associated with temporal Vs in such languages. If we are correct in assigning the <sup>second</sup> lowest V in (379) to government by a nom which is itself governed by a nominative phrase -- and there does not seem to be any particular indication that a more 'marked' case is present -- then it appears that there is a curious reversal in the structures pre-supposed by the 'present' and 'past' participles depending on whether they are 'adjectival' or 'verbal'. With the 'verbal' uses (perfect, passive, progressive) it is the -ing participle that derives from a locative structure; it is however the 'adjectival' -ed form (excited rather than exciting) which is parallel to the progressive. However, it may indeed be that the -ed inflexion with both passives and perfects in English is to be explained by the presence (as a secondary predication) of a 'contingent adjective' construction. Certainly, such appears to be involved historically. In this case, the structure in, for instance (379) would have to be further extended in this respect. However, in the absence of any strong synchronic motivation, I shall not proceed with such an analysis.

The 'have' perfect involves typically transitive verbs (though it may be extended). This consideration is central to our interpretation of the construction. Recall that have is a verb like contain that takes a nominativized loc as subject, and that it can appear in a structure with two empty Ns and a lower V embedded in the object nominative phrase. The lower predication is locational and the effect of the presence of the have predication is to move the locational phrase into subject position (and the lower subject into the object place): Finally, observe the operation of subjunction of a lower copula: My soup has a fly in it.



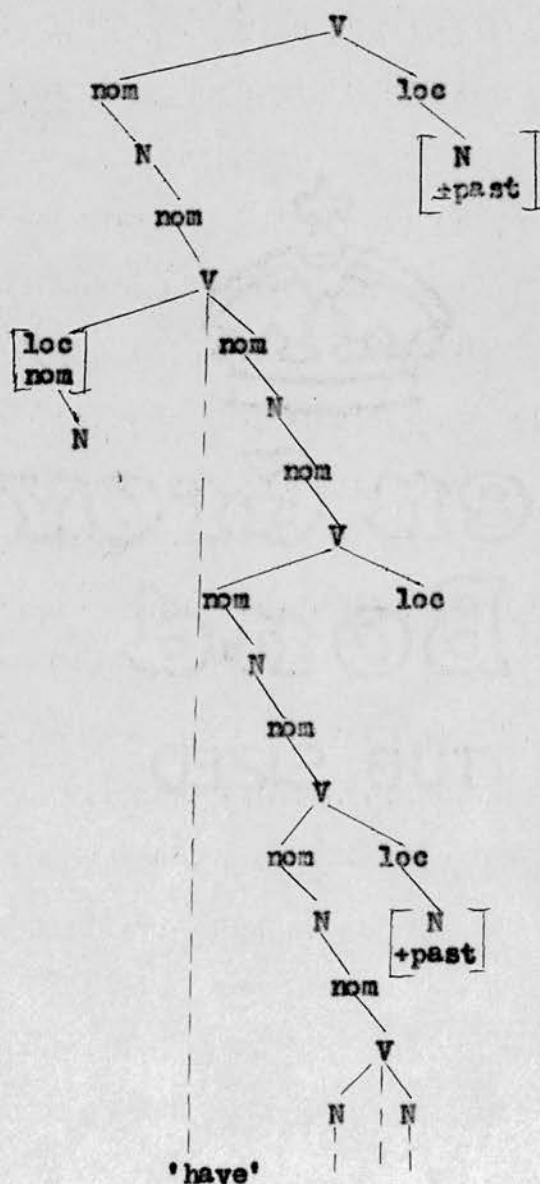
Let us turn now to 'have' perfects, having in mind these three properties of have: its appearance (with empty Ns) above a locational predication; the applicability of the X-principle; the absorption of the lower (copular) V. The role of 'have' in perfects is apparently in conflict with all three of these observations. There is no necessity for the lower predication to be locational, nor is the X-principle applicable -- since otherwise we would expect the same order as in passives (i.e. a reversal of the active order). The lower V is also not absorbed. But, clearly, considerations of naturalness again require us to examine whether the discrepancy is only apparent.

Recall here the observations concerning 'passive' characteristics of the perfect in various languages made in § 7.3 (as illustrated in (345), which shows the V in concord with the superficial object). Elsewhere such concord is with the subject. This can be allowed for if what comes to be the object is at some point a subject. Since it appears to start off (in active sentences) as an object, this entails two switches. This can be accomplished by two applications of the X-principle. But this requires that there be two predications with two empty Ns each above the 'basic proposition'. However, such a suggestion will also remove the discrepancies observed in the preceding paragraph. If we suppose that below the perfect 'have' predication there comes a locative predication (specifically a 'dative of interest') with an empty nominative phrase as subject and an empty locative phrase, then the empty places will be filled in accordance with the X-principle first in it and then in the 'have' predication -- resulting in restoration of the original order.

Moreover, the predication below 'have' is now locational; and since, as elsewhere, the V involved will be absorbed, its superficial absence is indeed (somewhat paradoxically) further support for our proposal. We also thus allow for the various morphological relationships described in § 7.3.

What I am suggesting concerning the derivation of 'have' perfects is this, then. In certain languages, typically above transitive verbs, the presence of a perfect configuration, i.e. a [+ past] temporal predication immediately above a [+ past], entails the introduction below the higher (as secondary predications) of a 'have' structure above a locational (specially 'dative' of interest), as indicated in (382):

(382):





Observe finally with regard to such a proposal that, as we noted in § 7.3, there are languages in which the perfect configuration (above transitives) requires the introduction not of the two secondary predications included in (382) but of only the lower one. They have thus sometimes in the past been described as 'passive' (because, in particular, of the resultant sequence). This is the case in Armenian, as described by Benveniste (1952). Consider the examples cited by him reproduced once again in (384):

- (384) a. Nora ē handerj ('eius est vestimentum')  
 b. Nora ē gorceal ('eius est factum')

which show a parallel between the expression of 'possession' and the perfect secondary predication. In both instances we have a so-called 'genitive' -- i.e. a dative locative.

Thus, even though Darrigol's hypothesis cannot be extended in any obvious way to perfects -- since they are indeed not aspectual in quite the sense that progressives etc are (cf. § 7.4) -- nevertheless an account of 'have' perfects entails an essentially localist interpretation.



## 8. Notes on nouns

### 8.1 Predicative nominals

In ch. 3 we interpreted clauses containing predicative nominals as uniformly consisting of a V with two dependent nominative phrases. However, we took into consideration only sentences of the type of (385):

(385) John is the leader

(and the corresponding causative We made John the leader).

Such an interpretation may be appropriate in instances like this (though we shall have occasion to reconsider our analysis somewhat even here). But there are other kinds of predicative nominal sentence where the notional, syntactic and morphological evidence would suggest an interpretation more in accordance with the accounts we have just provided for progressives and 'contingent adjectives'.

Predicate nominals expressing class inclusion or membership (or occupation of an official position and the like), as in This is an instruction, can, I am suggesting, be interpreted as deriving from a locative phrase in which (what in English comes to be) the surface predicate nominal is subordinate to an abstract class (or position) noun: 'This is in the class of instructions'. They locate someone or something in a class or (abstract) position. In some languages, a marker of the locative source remains in surface structure. We find, for instance, in Egyptian (Gardiner, 1927: § 117), alongside sentences involving spatial location marked by m, ('in') (and directional sentences with progressive aspect), sentences with predicative NPs after m (what Gardiner (1927: § 38) calls 'the m of equivalence'):

- (386) 1. iw šdw·k m sht ('Field-plots are in the country')  
 2. a. iw n3 m sb3yt ('This is an instruction')  
 b. iw·f m nsu ('He is king')

Consider too corresponding causatives (to (385)), involving once again m, or r ('to, towards') (Gardiner 1927: § 84):

- (387) a. rdi·n·f wi m h3ry niwt·f ('He placed me as chief over his town')  
 b. rdi·n·f sw r rp<sup>L</sup>ty h3ty-<sup>L</sup> ('He placed me as prince and chieftain')

Similar in this respect is, for instance, Welsh. The *essive*, which (in certain circumstances that we shall return to) marks a predicative noun in Finnish, is (as we have seen -- § 7.5) a specialized locative.

Corresponding inchoative and causatives are usually overtly directional, even in English:

- (388) a. Lulu {turned } into a monster  
                   (changed)  
 b. They {turned } Lulu into a monster  
                   {changed }  
                   (made)

Compare the Swahili examples discussed by Christie, 1969.

And notice once more that the marker in Finnish of the predicative noun in such dynamic predications, the translativ, is historically of general local origin (Eliot, 1890: 158). Observe finally that in English with change (but not make) we can get two surface directional phrases, as in:

- (389) They changed the house from a mansion into a ruin.

All of these sentences have the important distinguishing characteristic that the N in the locational (and directional) phrase(s) is referentially inclusive of the nominative N. The second N in sentences of the type of (385) is, on the other hand, referentially identical. There is thus this notional difference to accord with the distinctions in superficial representation reviewed above.

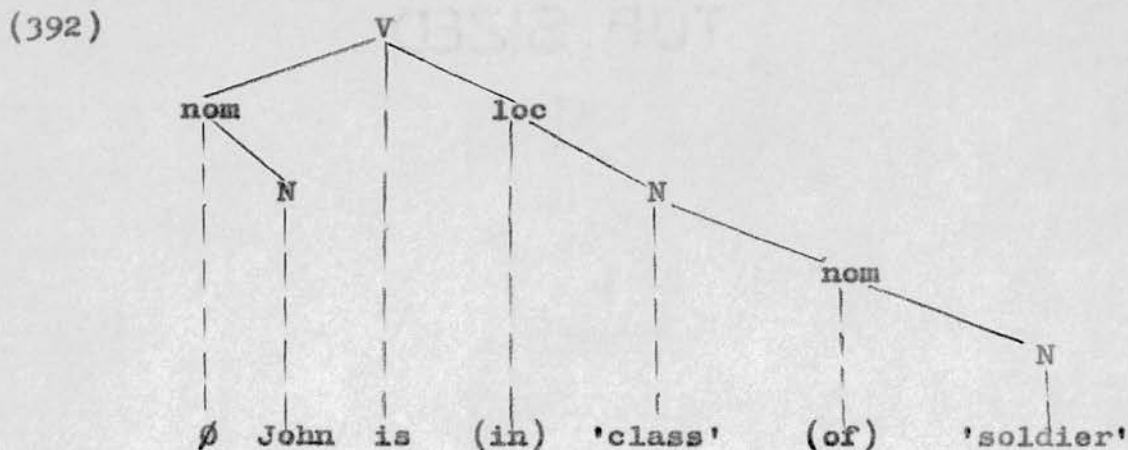
Observe also the reversability shown by The leader is John (though I am not suggesting that this is identical in import to (385)). Various other syntactic restrictions can be related to the distinction (Anderson, 1971c: § 11.62). Consider, for instance, in comparison with the reversability of (385), the restriction shared with class-inclusion predicates by spatial locatives exemplified in (390):

- (390) 1. a. Fred is a monster  
           b. ? A monster is Fred  
       2. a. The apples are (contained) in a box  
           b. ? A box contains the apples.

Thus a distinction between locative and equative predications appears also to be required in the case of predicative nominals to differentiate between pairs of sentences like those in (391):

- (391) a. John is a soldier  
           b. John is the soldier

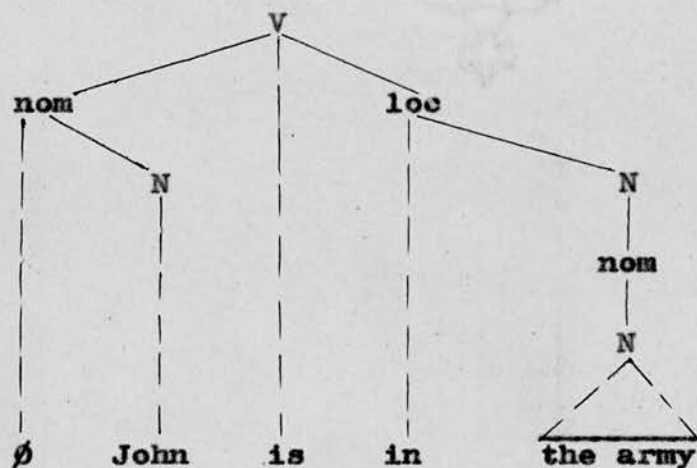
I have proposed elsewhere (Anderson, 1970a; 1971c: § 11.62) that sentences like (391.a) are indeed locational, and that in English they may have an alternative, 'fuller' version of the form John is in the army. Cf. similar pairs in other languages, like Serbo-Croatian On je student/On je na studijama ('He is a student'). Underlying both (391.a) and the alternative is presumably then a structure like that in (392):





Again, the occurrence of the (cf. the 'fuller' form of progressive) is superficial. Presumably, (391.a) is derived by 'removal' of the loc and the N immediately dependent on it (cf. again the progressive), and by deletion of the pre- and post-verbal noms (under subject/object/complement formation). The a before soldier is also, I presume, due to an output condition for English: it does not permit a derivation of the kind proposed for other instances of a (cf. Perlmutter, 1970); and such an element may be absent from analogous constructions in other languages. (When a one-member class is involved, as in occupation of some official position, the article may be absent in English: John is president.) John is in the army. on the other hand, involves subjunction of the lower nominative phrase to the locative N, as in (393):

(393)



(391.b)

involves not an underlying structure like (392), but is an equative predication containing two noms. (This is not to deny that underlying this there may be a rather different structure -- see further below for a tentative suggestion.)

We have seen that in certain languages the subject of the lower predication in progressive constructions is retained in pronominalized form. And this formed part of our argument that such constructions involve underlyingly two predications containing identical subjects (at some stage), the lower subject leaving behind in certain languages a pronominal reflex.

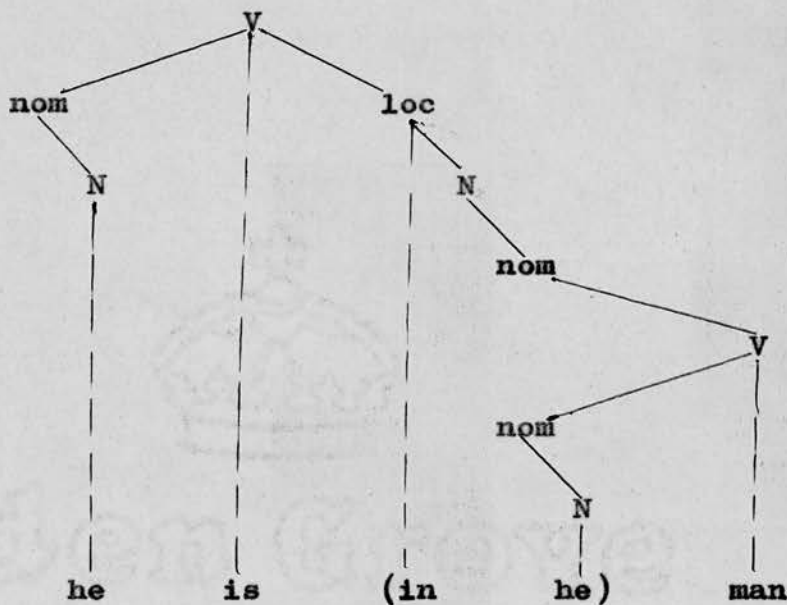


But, notice now that, together with the simple locative structure for predicative nominals exemplified in (386), we also find in certain languages constructions including a locational noun with such a pronominal dependent. Consider the Scottish Gaelic:

(394) Tha e'na chlachair ('He is in his-mason)

Similar evidence comes from Venda (in non-present tenses), as in the following: Ndo-vha ndi-nanga ('I-was I-doctor' -- Doke, 1954: 175). If we extend an interpretation like that proposed for progressives to this kind of construction, then the representation in (395) seems appropriate:

(395)



That is, the predicative noun originates as a V, a predicate: presumably it differs from verbs and adjectives in being [+ subst]. Consider this in conjunction with Bach's (1968) proposal that all nouns start off in predicative position in an embedded clause. The conclusion seems to be that all full semantic elements are underlying predicates, Vs. (Bach's 'term' corresponds to our N, and his 'contentive' to V.) They differ in specifications that determine, for instance, whether (in English) a higher predication of some sort is entailed, the character of such a predication, whether the lower V can be collapsed with the immediately governing N

(as in (393)), etc. The notional character of (the 'nuclear members' (cf. e.g. Lyons, 1966: 213-4) of) the three classes of predicate is clear, and familiar: sortal predicates ([+substantive], like man) are opposed to a set ([-subst]) which itself divides into those which attribute a characteristic ([+stative]), contingent (unwell) or not (immortal), and the [-stat] remainder.

The extent to which and the form in which such a sub-categorization is reflected morphologically and syntactically and the distribution of non-nuclear members are linguistic variables. However, there appears to be a correlation between such a hierarchy and the range of cases permitted to a V. Thus, non-derived substantive predicates are normally limited to a nominative dependent (as in the lower sentence in (395)). Stative non-substantives typically take only nom or nom and one locational case: Fred is ill, Fred is familiar with the story. Directional structures (involving nom, loc and abl) are possible only with deverbal adjectives: The curtain was stretched from wall to wall. Non-adjectival non-substantive predicates can also be directional, and permit an ergative: Fred sneezed; The house stands on a hill, Fred knows the truth; Fred slid from the door to the window; Fred read the book. The relationship with the internal structure of the cases suggested in ch.6 is clear: this is tabulated in (396):

(396)

	- loc - neg	+ loc - neg	± loc + neg
+ subst	+	-	-
- subst + stat	+	+	-
- subst - stat	+	+	+

If careful etc. (in e.g. Be careful) are counted as (underlyingly) simple adjectives (as suggested in ch.2) then the final column in (396) should be headed  $\begin{matrix} + \text{ loc} \\ + \text{ neg} \end{matrix}$ . The second heading could then read  $\left\{ \begin{matrix} + \text{ loc} \\ + \text{ neg} \end{matrix} \right\}$  (i.e. exclusively disjunctive).

However, recall now that we proceeded in ch.7 to argue that progressives (and 'contingent adjectives') did not originate in structures like that in (395), but that these represented intermediate stages arrived at by an operation which moved the lower sentence from under the subject nominative phrase to attachment to the locative. The locative was interpreted as a PRO-existential; it was suggested that progressives were existential predications concerning 'events'. They are moreover contingent existentials: they pre-suppose a higher point-of-time predication.

Such an interpretation of contingent adjectives and progressives raises some interesting questions with regard to the proposal for predicative nominals we have just formulated. Are we to regard these as ultimately existential also? (This would seem to accord in a way with the suggestion of Staal's quoted by Lyons (1968b:500) that one should 'compare the thesis "to be is to be somewhere" with Quine's slogan that "to be is to be the value of a variable"'.) However, such a view seems plausible only with regard to contingent predications involving (non-equative) predicative nouns, such that the classification or situation is asserted to exist for a certain time. Notice that the Gaelic locative construction which provided the motivation for the earlier proposal is indeed characteristic of contingent rather than absolute classification (cf. Calder, 1923: 155). So too the *essive* in Finnish (Eliot, 1890: 124,157); of the situation in

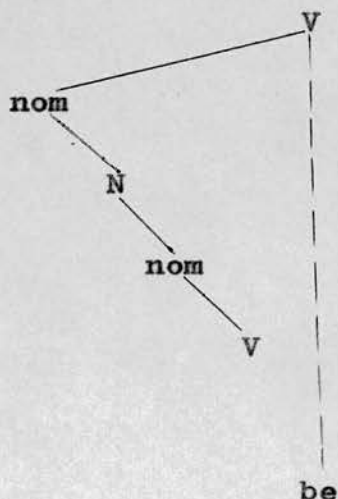


Egyptian I am uncertain, but all the examples with the 'm of equivalence' that I have encountered appear to be contingent. Something of the character of the distinction is rather nicely illustrated by Kneen's (1931: 145) description of the use of ta and she with predicative nominals in Manx:

- (397) The difference between ta and she is well exemplified in the two sentences she dooinney eh and t'eh ny ghooiney, both meaning 'He is a man'. If we see a figure approach us in the dark, and after looking closely at it we discover it to be a man, we would say, she dooinney eh (or, she dooinney t'ayn). But when we say t'eh ny ghooiney we convey a different idea. We mean that the person of whom we are speaking is no longer a boy, he has now reached manhood.

Now, we have already allowed for a distinction between contingent and absolute adjective predications, such that although contingent adjectives involve a superordinate existential predication (of the form of that in (370)), absolute adjective structures like that in (362.b) are derived by abjunction from something like (398):

(398)





I suggest that contingent and absolute noun predications may be distinguished with reference to the same structure types. In this respect, adjectives and nouns fall together. Further, in languages like English, there is attached to both a requirement that a higher predication (existential or intransitive) appear immediately above them (the V of this predication being realized (unless, in the case of contingents, the higher predication is dynamic -- i.e. directional) as be). We marked adjectives, in contradistinction to verbs as  $\begin{bmatrix} + \text{stative} \end{bmatrix}$ , with which is associated this requirement. Nouns too are  $\begin{bmatrix} + \text{stat} \end{bmatrix}$ , then.

Accordingly, the major classes of lexical items are

$\begin{bmatrix} + \text{pred} \\ - \text{subst} \\ - \text{stat} \end{bmatrix}$  ('verb'),  $\begin{bmatrix} + \text{pred} \\ - \text{subst} \\ + \text{stat} \end{bmatrix}$  ('adjective'),  $\begin{bmatrix} + \text{pred} \\ + \text{subst} \\ + \text{stat} \end{bmatrix}$  ('noun').

Case elements are presumably  $\begin{bmatrix} - \text{pred} \\ - \text{subst} \end{bmatrix}$ , whereas Ns ('terms')

are  $\begin{bmatrix} - \text{pred} \\ + \text{subst} \end{bmatrix}$ . We shall return to a consideration of the

status of 'terms' in § 8.3, and to a more careful treatment of these various distinctions in § 8.2.

Observe that such a proposal for 'non-definite' predicative nominals does not vitiate our original distinction between (391.a) and (391.b), which depended on the positing of an underlying equative (two noms -- 391.b) vs. a locational (391.a) structure. In terms of what has just been proposed, only contingent predications of the type of (391.a) are locational (specifically existential). However, such absolute predications become equative (like absolute adjectives) only as a result of abjunction: they do not originate in equative structures (cf. (398)). In fact, I suspect that even sentences like (391.b) do not start off as equative, but rather involve NP-conjunction: i.e. the NPs are the coordinate subjects of a symmetric predicate (cf. Lakoff & Peters, 1969)

of identity. (385) and its 'reversal' form the second two variants in a paradigm of the form of (399):

- (399) a. Fred and Amelia are alike  
 b. Fred is like Amelia  
 c. Amelia is like Fred

(This suggestion has the perhaps interesting consequence of in principle removing all definite descriptions from predicative position.)

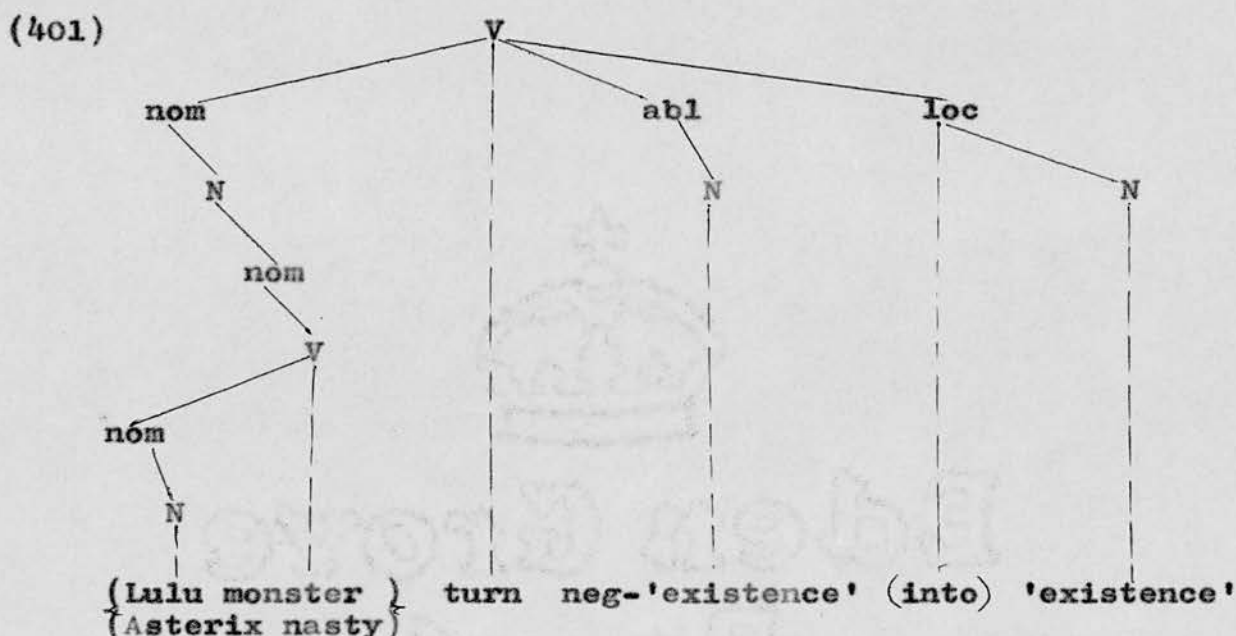
Notice too that by a slight extension such an analysis is quite compatible with the phenomena adduced in support of the so-called 'lexicalist position' (Chomsky, 1970) concerning derived nominals (if we ignore, as we have throughout, Chomsky's eccentric notion of a 'deep' syntactic structure). Thus, the head noun in John's proof of the theorem can from the first be marked as a [+subst] predicate, as compared with the [-subst] prove, to which it is otherwise identical. The various restrictions on proof (etc) (vs proving (etc), which is [+subst] only by transformation) can be related to just this distinction. It is only such [+subst] predicates which violate the restriction to a nominative dependent embodied in (396).

Before proceeding with a more detailed examination of various of the notions that have just been introduced, I want quickly to review the directional equivalents of the structures containing contingent adjectives and nouns we have been looking at. In the preceding chapter, we analysed the Aktionsarten of inception, continuation and termination as 'directional existentials' -- i.e. as involving movement (or negation of it) into or out of existence. Clearly, if our analysis of contingent nominals and adjectivals is correct, then their directional equivalents are also such existentials. We have already observed ((388) and (389)) the occurrence of direc-

tional markers with dynamic predicative nouns. With adjectives these are in English typically absent, but the 'inchoative' verbs involved are either historically or contemporaneously movement predicates, as illustrated in (400):

- (400) a. Asterix turned nasty  
 b. The Professor went mad  
 c. Agatha became ill-natured

This distribution, and the prepositions etc. in (186), together with the notional relationships involved, are provided for if underlying such sentences as those in (186.b) and (400) there is a structure like that in (401) -- i.e. a representation similar to (371.a):



Once again the lower V is attached to the existential locative phrase, and the various copying and deletions we are familiar with result in the structures more directly underlying (388.a) and (40D).

However, note now that if this interpretation is essentially correct, then a sentence like (389) must involve a reduction from two coordinated (simultaneous) existential predications: roughly 'they made the house's being a mansion go from existence and the house's being a ruin come into existence'.

## 8.2. Secondary predications and stativity

We have associated with the predicates underlying surface nouns and adjectives in English the feature [+stative], which apart from its semantic value, acts as an 'instruction' that a secondary predication be introduced above the clause containing these predications. However, if such a predication is already embedded in a directional (i.e. inchoative) clause, then the introduction of the secondary predication is blocked. (Alternatively, it is introduced, and absorbed into the inchoative; but there is no evidence for this.) We have also discovered that in various languages the occurrence of a perfect configuration above a clause entails the introduction of a secondary complex of a certain kind (the 'have' perfect) above that clause. Before giving some consideration to the semantic status of [+stative], which we have left problematical (cf. § 6.5), I am going to suggest that it can be argued that in English [-stative] predicates also require the superimposition of a secondary predication.

We assumed above (in § 7.1) that verbal tense is derived uniquely by copying of a temporal locative (or copying of such a copy) under the V of the temporal predication, followed by subjunction of the V embedded in the temporal clause to the temporal V, resulting in structures like (324). We must now consider some evidence that such an account is over-simple in at least one respect, with regard to English. I have in mind phenomena associated with the derivation of 'expletive do' in sentences like Did Fritz come? or Fritz didn't come. As is well known (in some form or other), if one or more auxiliaries are present above the 'main verb' then the first (highest) of them takes the various concord inflexions of tense, person and number, and is involved in the structural changes connected with the development of



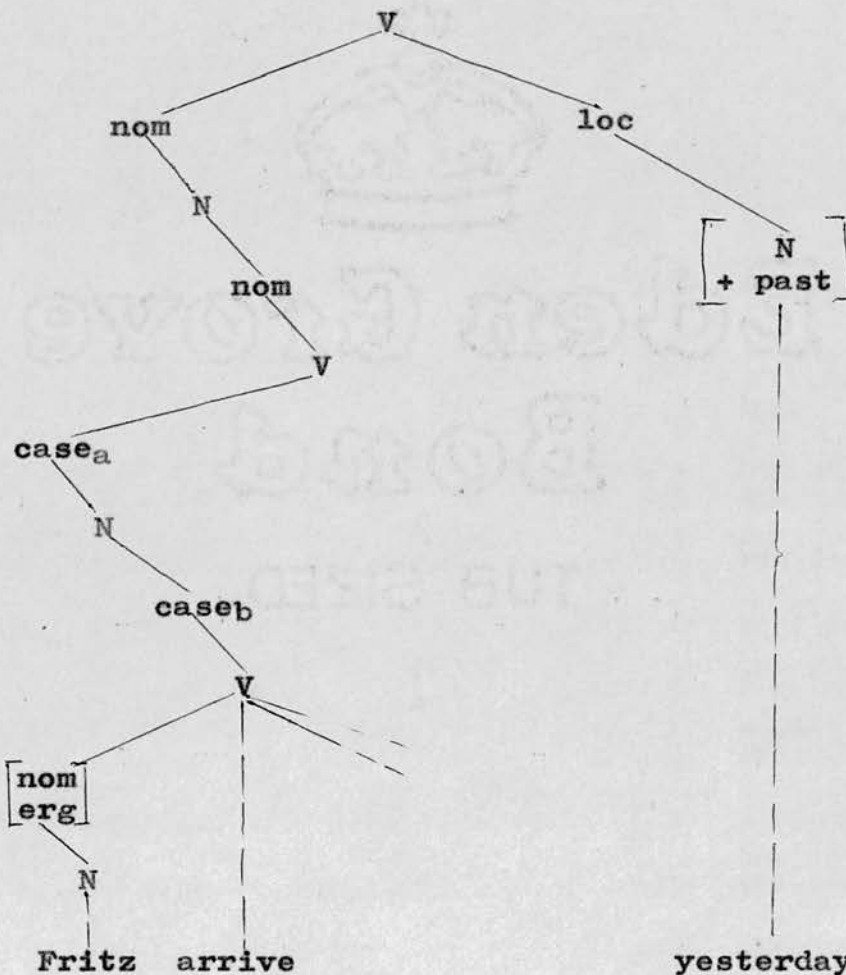
interrogative sentences etc. Is Fritz coming?, Fritz isn't coming. However, in the absence of such an auxiliary form, some element realized as do is crucially involved in the rules placing the negative element and in the interrogative transformation (or non-transformation -- cf. McCawley, 1970), though such an element is absent (superficially, at least) if the sentence is non-interrogative, non-negative, non-emphatic etc; and it is this expletive auxiliary which shows tense/person/number concord. The details of the 'behaviour' of this do are fairly well documented, and various accounts have been proposed, mainly either requiring insertion of do ('Do-support') under certain circumstances (e.g. Klima, 1964: § 12), or its deletion in complementary situations (e.g. Jacobs & Rosenbaum, 1968: ch.5). I want now to consider the interpretation of such phenomena within the present framework.

We conceived above (in ch.7) of the 'main verb' being absorbed into the tense complex (as illustrated in (322)-(324)). We allow for the possibility of tense marking being associated with the appropriate auxiliary, where any are present, merely by generalizing this notion such that absorption will apply to the V immediately below the tense predication, whatever it might be (on the assumption that the relevant auxiliary verbs, come below the tense one in the hierarchy of predications superordinate to the 'main verb' -- cf. Anderson, forthcoming a: XVI and XVII). If this occurs before the operation of the interrogative transformation or negative placement, then the formulation of these rules can be somewhat more economical. This suggests that the element realized as do is present even before the operation of these transformations, since otherwise (unless we specifically exclude it) the main verb would be absorbed and then undergo the interrogative transformation, etc. What I propose then is this. Do realizes the V in a

predication which always comes immediately above a non-adjectival verb: that is, not only adjectives and nouns (cf. § 8.1 above) but also non-adjectival verbs require to come immediately below a <sup>secondary</sup> ~~quasi~~-predication of a certain sort. Thus, contrary to what was suggested in connexion with (323), the full verb is not absorbed directly into the tense complex, but only an auxiliary, either one of the 'ordinary' ones, or, if none of these come above it, the do-form. This complex of auxiliary and the tense specification is then what is relevant to the operations connected with the interrogative, etc. However, if the do-V is not separated from the main verb as a result of these transformations, then subjunction of the main V with respect to the do verb takes place.

Thus, underlying a sentence like Fritz arrived yesterday, there is something like the structure in (402):

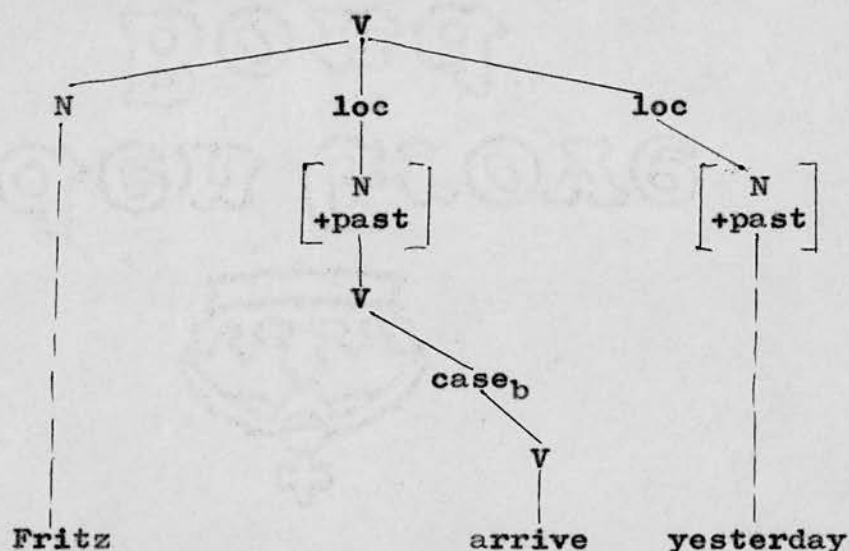
(402)



('Case<sub>a</sub>' and 'case<sub>b</sub>' are case nodes the nature of which we must discuss in a moment.) The topmost V is that of the tense

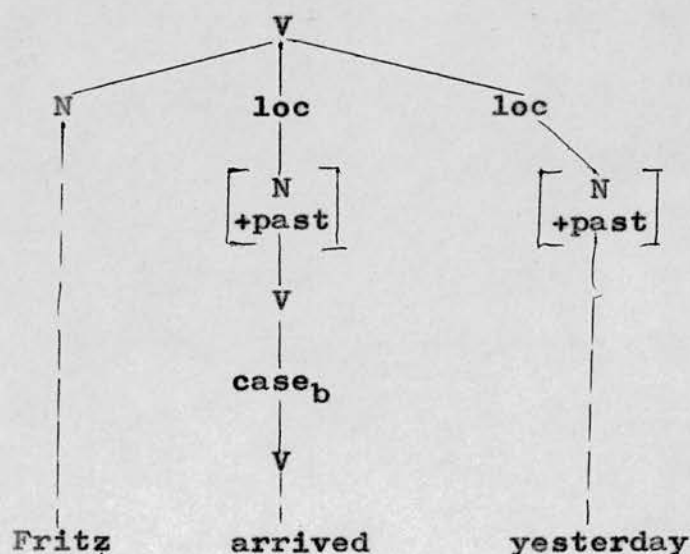
predication; the second V is that realized in interrogatives etc as do; the lowest V is the full verb. Abjunction, copying and deletion of originals will occur as before. Verbalisation occurs three times: firstly with respect to the locative phrase and secondly the nominative phrase containing the do-verb, both of those being deconcatenated under the tense V, as in (403), the original locative phrase having been retained, but the nominative deleted.

(403)

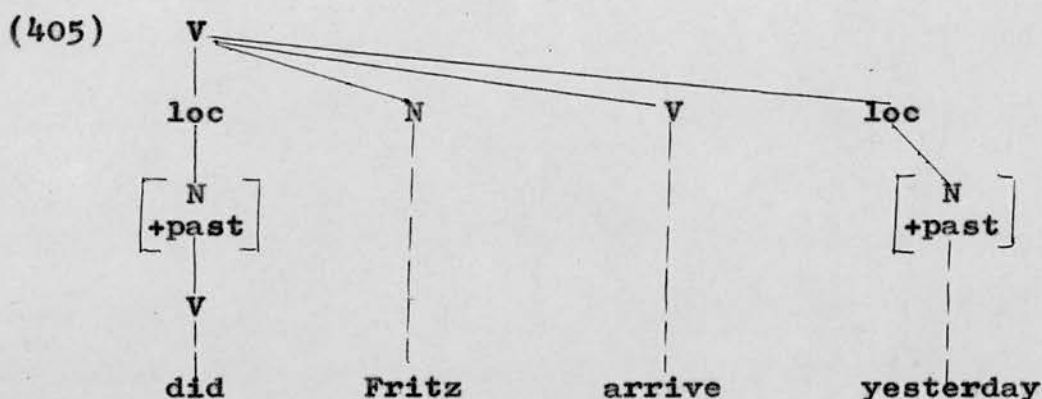


In non-emphatic, non-interrogative, non-negative sentences, etc, the third verbalisation involves the lowest V and the do-V, as represented in (404):

(404)



In (for instance) an interrogative sentence, the lowest V is left behind superficially, as in (405), and expletive do is inserted under the tense complex.



(I am ignoring here, of course, the question of what is being questioned, and indeed the whole problem of what the semantic representation for interrogative sentences might be. My intention has been to illustrate the role of the do-predication in the interrogative transformation, whatever its semantic correlate, and whatever form that operation might take.) Notice, incidentally, that such an interpretation entails a status for expletive do rather like that for 'vicarious do' (as in She ate the lobster after I'd told her not to do it) which presumably is inserted into an empty anaphoric V position. Since it is only the first auxiliary that is absorbed under the tense V and thus is 'moved' by the interrogative transformation, when another auxiliary appears immediately above the do verb, it will not be separated from the main verb, and the verbalisation illustrated in (404) will occur - as in, say, Is John coming?

Observe that at an earlier period in (some kinds of) English (and in some modern dialects), this last absorption rule appears to have been only optional in non-emphatic, non-interrogative, non-negative etc sentences when no other auxiliary was present. Consider Traugott's (1965: § 6) example from Thomas Nashe (late sixteenth century): Alledging many examples... how studie dooth effeminate a man.<sup>1</sup> Further,

1. For discussion and references, see Dietze, 1895; Ellegård, 1953: pt.2; Visser, 1969: §§1412-1414. Other examples and references appear in Sugden, 1936: § 359; Brunner, 1962: 323-34. Compare Old



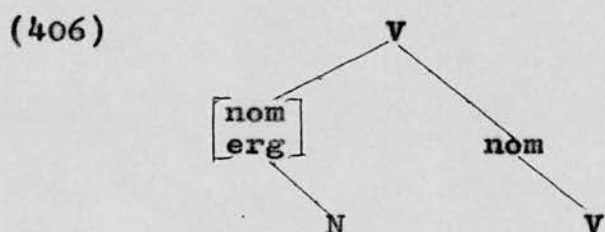
this optional rule occurred before the interrogative, for example: together with interrogatives with do, we also find examples (again from Nashe) like Why iest I in such a necessarie perswasieue discourse? (cf. Ellegård, 1953: pt.2, § 6.3). At an earlier period still, the absorption rule seems to be optional even when the do-V follows an auxiliary have or a modal. Thus, Traugott's (1965: § 5) example from the (fifteenth century) Paston letters: More plainly than I may do wryte at thys tyme; and examples like the following from sixteenth century Scottish poetry (Murray, 1897, 565): As I afore haue done discus. (Cf. too Mustanoja, 1960; 603.) The different distribution of do in these varieties of English can be allowed for merely in terms of variation in the conditions for do-absorption.

We must now consider the character of the case nodes in the do-predication, which were merely labelled 'case<sub>a</sub>' and 'case<sub>b</sub>' in the representations in (402) through (404). Do is an auxiliary, as is clear from the operations discussed above, and I therefore assumed in formulating the representation in (405) that 'case<sub>b</sub>' had been pruned in accordance with the auxiliary status of the governing V. This means that this element includes at least nom. We have not so far had to allow for nominativized adnominal case elements: presumably then 'case<sub>b</sub>' is simply nom. Let us consider what indications there might be of the character of 'case<sub>a</sub>'.

French faire + infinitive -- Tobler, 1921: 20-4 (or, alternatively, Tobler, 1905: 25-9). Consider also the use of thun in various kinds of German: see e.g. Gebhart, 1907: § 406.

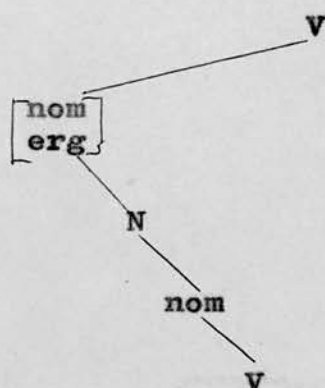
The higher predications required by adjectives contained two nominatives or a nominative and a locative, which suggests that the do-predication is like neither of these. However, 'case<sub>a</sub>' appears in subject position and must therefore contain either nom or erg or both. The predication is underlyingly intransitive (to avoid complications with the X-principle). Do otherwise in modern English is transitive, and is indeed an 'existential causative', i.e. it takes an 'object of result' (apart from where used 'vicariously', when however it is also transitive), as in I did that painting. In O.E. and some M.E. dialects it appears to have been a more general causative (rather than merely an existential one), as in the example from 'Havelok' cited by Mustanoja (1960: 601): Do hem fle (see too Ellegård, 1953: part I, § 3). And, indeed, the expletive or 'periphrastic' use of do we have been considering is usually thought to have had its origin in the causative formation (which itself may be at least in part due to 'Latin influence') - cf. Ellegård, 1953: 208-10.

All this tends to suggest that the do-predication is at some point a transitive ergative structure, perhaps of the character presented in (406):



in which the ergative phrase is empty. It is with regard to such a 'transitive' configuration that do (as elsewhere) is inserted. This representation in (406) is derived (by abjunction) from a structure like that in (407):

(407)



Observe that this is exactly the representation that was proposed above (cf. 286) as characterizing 'intransitive causatives'. Visser (1969: §§ 1412-1414) is the most recent scholar to have argued that expletive do was developed on the model of such a structure (for discussion, see Anderson, in preparation a).

The do-predication is required immediately above any non-adjectival V that is not an auxiliary. Thus, we find Does the table have a book on it? (with the have-construction) and Did it begin to rain? (with the inceptive), as well as examples with full verbs. We characterized auxiliaries above in a preliminary way as a V immediately governing another V. But clearly the be in equative and locative predications like He is the butcher and He is in the garden also undergoes the interrogative transformation etc: Is he the butcher?, Is he in the garden? Nor does the do-predication come above them, if interrogative sentences are our guide. But the be in these does not appear to immediately govern another V. It would seem then that there is a more general feature, say [+cop(ula)], which is associated with availability for the interrogative transformation etc.<sup>1</sup> The presence of this can be predicted from the character of the predication: directional existentials with an empty

1. This may appear not to be a particularly felicitous choice of term, since clearly [+cop] must also be associated with modals. However, the interpretation of modals proposed in Anderson, forthcoming a: XVII renders this a more natural choice.



nominative, for instance, will not have the feature attached (Did it begin to fall?, Did it become precarious?), but the corresponding non-directionals will (Is it falling?, Is it precarious?). The precise character of such redundancy conditions may be a linguistic variable.

Having established in outline the character of the do-periphrasis, we are in a position to attempt to resolve some of the problems attaching to the notion 'stative'. In § 6.5 we formulated an inter-predicate constraint for causative superordinates (295) which took the form of a complex disjunction. This was because we had to allow for the exclusion from immediately below causatives of non-agentive adjectives and predications containing an ergativized loc (know etc). Now, it would be notionally appropriate and it would enable us to greatly simplify (295) if, there was some semantic characteristic which these two groups of predications had in common. The obvious (and traditional) label is 'stative'. However, above (in § 8.1) we associated the occurrence of +stative in a predicate segment with the introduction of a be- rather than a do-periphrasis. Let us now try to reconcile these two functions of stativity.

Suppose we propose that the segments underlying know etc are indeed [+stative]. We must then explain the absence of a be-periphrasis. But notice that we do find such structures: i.e. an ergativized locative predication with a superordinate be-periphrasis -- as illustrated by (408.b), as compared with the a example without be:

(408) a. I know the rules

b. I am familiar with the rules

Thus, rather than the be-periphrasis being unexpectedly excluded above such stative predications, there is a dual possibility: either the do- (know) or the be- (familiar) periphrasis is



permitted. Such 'stative verbs' are thus (as we might expect from their notional character) intermediate in this respect between verbs and adjectives. Thus there is no impediment to regarding such predicates as [+stative]. We merely have to formulate a very natural constraint on non-directional ergativized or nominativized locative predicates that they be [+stative] but that they take either periphrasis, with existential be or do. (I regard the be-periphrasis as existential because of the occurrence of corresponding directionals.)

Notice further, however, that this same ambivalence exists with both simple directional clauses (as we observed above -- in § 4.7) and simple locatives (as we failed to observe, for reasons which follow). We noted in § 4.7 stative directionals both with (136) and without (134) be. The stative character of (134.a), repeated here as (409):

(409) The road goes from London to Brighton  
was clear from the unacceptability of (410):

(410) \*The road is going from London to Brighton.

We designated the 'corresponding' locative (non-directional) clauses 'static' rather stative because of the progressive aspect possibility noted in (411):

(411) The rug is lying on the floor.

But observe now that there are stative as well as non-stative static locatives which do not take the be-periphrasis -- as illustrated by (412):

(412) \*London is lying to the north of Brighton.

The same situation is found with clauses in which loc is nominativized and nom ergativized -- as can be verified by testing out these various possibilities with a verb like occupy. Thus, the periphrasis ambivalence is found with all locational (including directional) predicates. Where those with ergativized or nominativized loc differ is in being necessarily stative;

the others may be non-stative.

The various modifications and additions to our conception of the grammar which have been made since the formulation of the rules in (263) require us to reconsider not only some of the details of the proposals made there but also the general character of the constraints involved. All category symbols have now been eliminated as systematic elements, and all major lexical items now originate as Vs, i.e. segments that are [+pred]. Originally (in ch. 1) we envisaged various blocks of subcategorization and dependency rules applying separately to Vs, or Ns or case elements, etc. The just-mentioned modifications make it possible to merge these blocks into a single pair: firstly, a set of intra-segment constraints (the former subcategorization rules) which specify what is a well-formed segment; and secondly, a set of inter-segment constraints (the former dependency rules) which specify the manner in which segments may be assembled into trees. The latter are (as far as I can tell) downward-oriented (the governor specifies its possible dependents) and recursive. The notion of inter-predicate constraint that was introduced above (§ 6.5) is merely an instance of this latter more general restriction. Let us now try to formulate such of these constraints as we have been able to provide evidence for.

The set of constraints which follows has two subsets, (i) intra-segment and (ii) inter-segment constraints, the latter falling into two groups, (a) adjunction constraints, specifying proper immediate dependents, and (b) inter-predicate constraints -- i.e. restricting the range of possible complement predicates. Set (ii.b) in particular are merely exemplificatory. All instances of embedding involve dependence on a nominative N (whatever the adnominal case may be).

(413) i. 1.

$$\left[ \begin{array}{c} \\ \\ \end{array} \right] \rightarrow \left[ \begin{array}{c} + \text{predicative} \\ + \text{substantive} \\ + \text{locative} \end{array} \right]$$

$$2. \quad a. \quad V \rightarrow \left[ \begin{array}{c} + \text{ergative} \\ + \text{stative} \end{array} \right]$$

$$b. \quad C \rightarrow \pm \text{negative}$$

$$c. \quad \left\{ \begin{array}{c} N \\ + \text{locative} \end{array} \right\} \rightarrow \pm \text{nominative}$$

$$3. \quad \left\{ \begin{array}{c} - \text{ergative} \\ + \text{locative} \end{array} \right\} \rightarrow \pm \text{ablative}$$

$$4. \quad a. \quad \left\{ \begin{array}{c} + \text{ergative} \\ - \text{locative} \\ + \text{locative} \\ + \text{ablative} \end{array} \right\} \rightarrow \pm \text{reflexive}$$

$$b. \quad \left[ \begin{array}{c} \alpha \text{ablative} \\ - \alpha \text{locative} \\ \langle \{ + \text{ergative} \} \rangle \\ \langle \{ + \text{nominative} \} \rangle \end{array} \right] \rightarrow [ + \text{stative} ] /$$

$$\left[ \begin{array}{c} V \\ \langle + \text{locative} \rangle \end{array} \right]$$

$$c. \quad \left[ \begin{array}{c} + \text{ablative} \\ - \text{reflexive} \\ + \text{nominative} \end{array} \right] \rightarrow \pm \text{ablative-nominative}$$

$$5. \quad \left[ \begin{array}{c} N \\ \{ \{ + \text{locative} \} \} \\ \{ \{ + \text{nominative} \} \} \\ \{ \{ + \text{ablative} \} \} \end{array} \right]$$

$$ii \quad a. \quad 1. \quad a. \quad + \text{locative} \rightarrow \text{loc} / \left[ \begin{array}{c} + \text{pred} \\ + \text{subst} \end{array} \right]$$

$$b. \quad + \text{ablative} \rightarrow \text{abl} / \left\{ \left[ \begin{array}{c} \text{loc} \\ - \end{array} \right] / \left[ \begin{array}{c} - \\ + \text{reflexive} \end{array} \right] \right\}$$

$$c. \quad C \rightarrow N$$

$$2. \quad \left\{ \begin{array}{c} V \\ + \text{nominative} \end{array} \right\} \rightarrow \text{nom} / \left\{ \begin{array}{c} \left[ \begin{array}{c} \text{abl} \\ - \end{array} \right] / \left[ \begin{array}{c} - \\ + \text{ablative-nominative} \end{array} \right] \\ \left[ \begin{array}{c} \text{loc} \\ - \end{array} \right] / \left[ \begin{array}{c} - \\ + \text{nominative} \\ V \end{array} \right] \\ - \end{array} \right\}$$

$$3. \quad + \text{ergative} \rightarrow \text{erg} // \left\{ \begin{array}{c} \left[ \begin{array}{c} \text{nom} \\ - \end{array} \right] / \left\{ \begin{array}{c} - \\ + \text{reflexive} \\ + \text{nominative} \end{array} \right\} \\ \left[ \begin{array}{c} \text{loc} \\ - \end{array} \right] / \left[ \begin{array}{c} - \\ + \text{locative} \end{array} \right] \\ - \end{array} \right\}$$

b. have/there isb. have/there is .....

b. have/there is

$$\begin{bmatrix} + \text{ locative} \\ + \text{ nominative} \\ - \text{ ergative} \end{bmatrix} \rightarrow \begin{bmatrix} + \text{ locative} \\ + \text{ copula} \end{bmatrix}$$

causatives/progressive (etc) aspect

$$\begin{bmatrix} \propto \text{ locative} \\ - \propto \text{ ergative} \\ - \text{ nominative} \end{bmatrix} \rightarrow \left\{ \begin{array}{l} - \text{ stative} \\ + \text{ ergative} \\ - \text{ locative} \end{array} \right\}$$

passives

$$\begin{bmatrix} + \text{ locative} \\ + \text{ ablative} \\ + \text{ nominative} \\ - \text{ ergative} \\ - \text{ reflexive} \end{bmatrix} \rightarrow \left[ \begin{array}{c} + \text{ ergative} \\ \langle - \text{ reflexive} \rangle \\ \langle - \text{ locative} \rangle \end{array} \right]$$

The following abbreviatory symbols have been employed:

$$\begin{array}{lll} (414) & V & = + \text{ predicative} \\ & N & = \begin{bmatrix} - \text{ predicative} \\ + \text{ substantive} \end{bmatrix} \\ & C & = \begin{bmatrix} - \text{ predicative} \\ - \text{ substantive} \end{bmatrix} \end{array}$$

1.1 embodies the proposal made in § 8.1 whereby all segments are subcategorized with respect to the characteristics  $\pm$  predicative,  $\pm$  substantive, together with a suggested equal status for  $\pm$  locative. This is possible because both Ns and Vs must be subclassified according to whether they are take a locative as dependent, and the functional elements themselves fall into locative (loc, abl) vs. non-locative (nom, erg) subsets. 1.2.b incorporates the second distinction we have associated with the cases. Clearly, such a formulation is much too restricted, however, I have included it as such in (413) because we have taken account in our discussion of this distinction only with respect to the functional elements. 1.2.a expresses the constraint that only predicative elements (Vs but not Ns or cases) can be ergative or stative. Ns, unlike Vs or cases, may have no dependent; however, I shall argue in § 8.3 that Ns may have a dependent nom, loc or abl. We have hypothesized thus far (at any rate) that Vs on the other hand have an



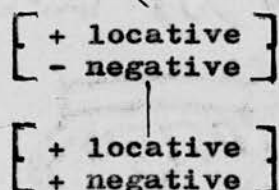
obligatory dependent nominative phrase. This distinction, together with the fact that loc may be nominativized, is what underlies the formulation in 1.2.c. 1.5 is an overriding constraint on Ns, such that any  $\begin{bmatrix} - \text{pred} \\ + \text{subst} \end{bmatrix}$  is not well formed if it also marked positively for more than one of locative, nominative and ablative: the dual braces indicate an exclusive disjunction. We shall find in § 8.4 that this constraint too must be weakened, and may be unnecessary. 1.3 introduces a departure from what we have assumed thus far. Up to this point we have allowed abl to be present in a predication only if loc is also present. Abl may (in fact, must) appear alone if immediately dependent on N (cf. § 8.3). There are also instances like Fritz was absent from the meeting and Charlie is/comes from Glasgow which (in their different ways) appear to show a dependent abl without loc. 1.3 assumes that this situation is not derived, and that abl without loc occurs only in predications that also lack erg. (They are also stative -- which point we shall return to below.) 4.a and 4.c assert nothing novel: reflexiveness is available in clauses that are agentive or directional; and in directional clauses either the ablative or the locative may be nominativized. 1.4.b requires of  $\begin{bmatrix} + \text{ablative} \\ - \text{locative} \end{bmatrix}$  and  $\begin{bmatrix} - \text{ablative} \\ + \text{locative} \end{bmatrix}$  predicates that they be stative, though in the case of the latter this is restricted (by the conditions within angle brackets) to Vs that are either + ergative (know) or + nominative (contain), but not both (occupy), which may be  $\pm$  stative.

The constraints under ii contain few innovations (cf. (263)). Notice however that we can now interpret them as specifying the necessary dependents of segments specified in a particular way. Thus, the symbols immediately to the right of the arrow are abbreviations for the kind of segment that are dependents of the segments specified to the left. ii.1.a.1 allows for a

$\begin{bmatrix} + \text{ locative} \\ - \text{ negative} \end{bmatrix}$  segment to be dependent<sup>d t</sup> on a  $\begin{bmatrix} + \text{ pred} \\ + \text{ subst} \\ + \text{ locative} \end{bmatrix}$  segment.

(This excludes loc from being introduced as a dependent of a + locative case.) ii.a.2 is an expansion of the rule introducing nom to allow for a  $\begin{bmatrix} - \text{ locative} \\ - \text{ negative} \end{bmatrix}$  to be dependent on Ns as well as Vs. One final aspect of our reinterpretation of such rules requires to be remarked upon. Constraints like the first part of ii.a.1.b which attach abl to loc (in certain circumstances) must now be interpreted as instructions to form a complex segment, of the form of (415) in this instance:

(415)



If the specifications for loc and abl are allowed to 'merge' into a single segment, then contradictory specifications arise. (I assume such a constraint on simple segments -- as with phonetic segments.)

The constraints in ii.b merely embody various observations concerning inter-predicate restrictions that we have made in different places in the preceding discussion. They are all conditions on a predicate (indicated to the right of the arrow) to be embedded in an empty nominative phrase immediately dependent on the predicate to the left of the arrow. The second of these collapses two constraints, one for causatives

( $\begin{bmatrix} + \text{ ergative} \\ - \text{ locative} \end{bmatrix}$ ), the other for progressives etc ( $\begin{bmatrix} - \text{ ergative} \\ + \text{ locative} \\ - \text{ nominative} \end{bmatrix}$ )

both requiring the same lower predicate type. Notice finally that the E prefixed to - reflexive in the constraint for passives is an indication of non-universality -- i.e. restriction to English and similar languages which require the lower clause to be transitive. (i.e. not both reflexive and non-locative -- cf. i.4.a).

We must add to such constraints on underlying representations the various conditions under which secondary predications are introduced. However, I shall not explore here the character of these phenomena. But there is one topic, connected with secondary predications in the sense that in English the process involved applies (at least) to those we have considered, that we can briefly give some consideration to. We observed above that as well as instances involving a 'main verb' with the feature [ + copulative ] (like Fritz is in the garden) -- this feature being associated with various superficial characteristics relating to concord, negative placement etc -- there are various of the predications with empty nominative phrase which are also [ + copulative ]. The distribution of the feature over the instances we have considered is assigned by (416):

$$(416) \quad \left[ \begin{array}{l} \alpha \text{ergative} \\ - \text{ablative} \\ - \text{reflexive} \\ - \text{nominative} \end{array} \right] \rightarrow [ - \text{copulative} ]$$

This excludes as [ + copulative ] transitive causatives

f1  $\left( \left[ \begin{array}{l} + \text{ergative} \\ - \text{ablative} \\ - \text{reflexive} \\ - \text{locative} \end{array} \right] \right)$ , affectives like know  $\left( \left[ \begin{array}{l} + \text{ergative} \\ - \text{ablative} \\ - \text{reflexive} \\ + \text{locative} \end{array} \right] \right)^1$  and the Aktionsarten  $\left( \left[ \begin{array}{l} - \text{ergative} \\ + \text{ablative} \\ - \text{nominative} \\ - \text{reflexive} \end{array} \right] \right)$ .

### 8.3. The derivation of nouns

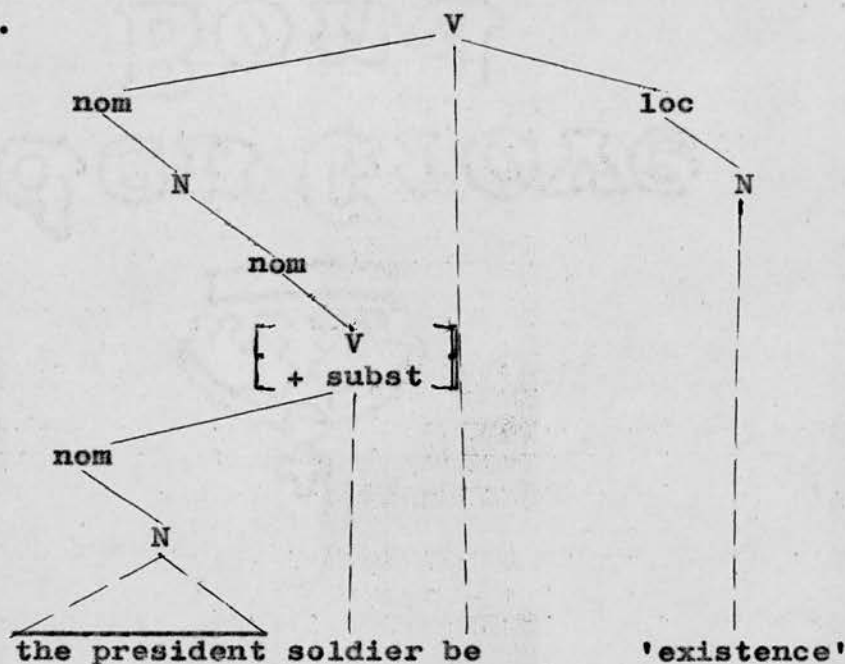
I want now to consider in outline the derivation of surface non-predicative nouns from the combination of term (N) plus predicate (V) which was proposed as their source in § 8.1. Firstly, let us complete our examination of nouns in predicative position. In § 8.1, I claimed that nouns were stative like adjectives and that like them they fell into two (non-disjoint) sets: absolute and contingent. -- It is probably better to say that they can be used in these two different kinds of predication.

1. These verbs can take an empty nominative in examples like I know him to be a fool.

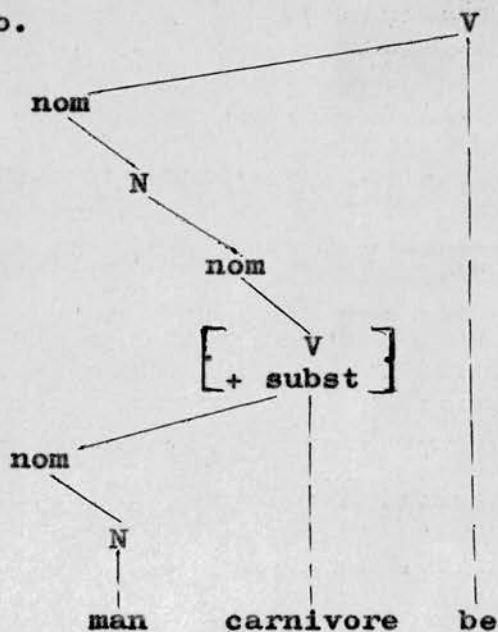


A predication involving limitation to or for a particular time of a stative predicate requires the introduction of an existential secondary predication above that predicate; otherwise the predication introduced is intransitive. Compare the structures in (417), underlying respectively The president is a soldier and man is a carnivore. (I ignore in these representations the questions of tense, and the definiteness of the subject in the former.)

(417) a.



b.



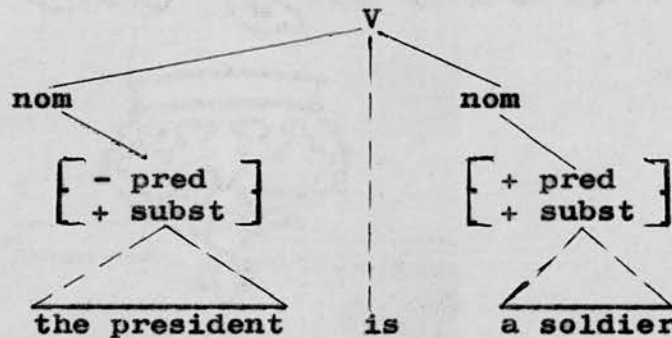
The upper predication is in both instances secondary. I shall consider from now on only the contingent structure represented in (417.a), since the development of (417.b) involves a subset



of the same process. It is perhaps worth noting in passing, however, that surface tense distinctions involving sentences like (417.b) are normally a reflexion of an underlying distinction in the subject: the 'pastness' in The dodo was a bird does not involve the classificatory predication itself, but rather is predicated of the existence of the dodo.

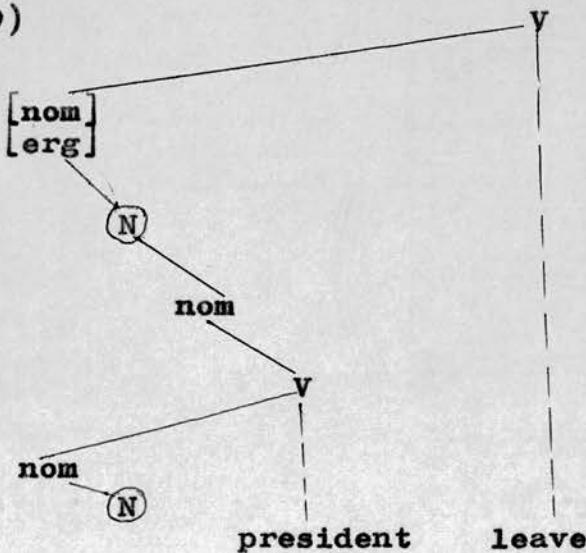
As elsewhere with such existential sentences as (417.a) containing an empty nominative subject, the lower V is attached to the existential N, and its subject is copied on to the empty N (cf. (395)). After deletion of the existential locative, we get (418):

(418)

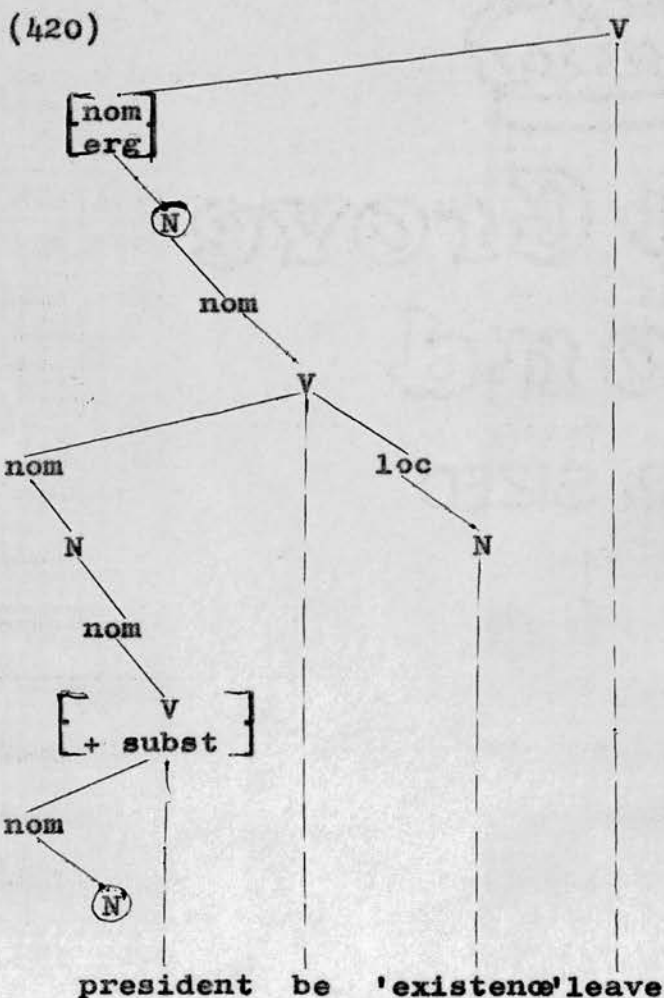


(The two noms are subsequently pruned.) However, clearly, if we follow our proposal of § 8.1 and Bach, 1968, the subject noun is itself complex in origin, and presumes the embedding of a substantive predicate dependent on the N. Let us now consider such a subject noun, firstly in a sentence that does not itself overtly contain a predicative nominal, as The president left. Underlying this is then the structure in (419):

(419)

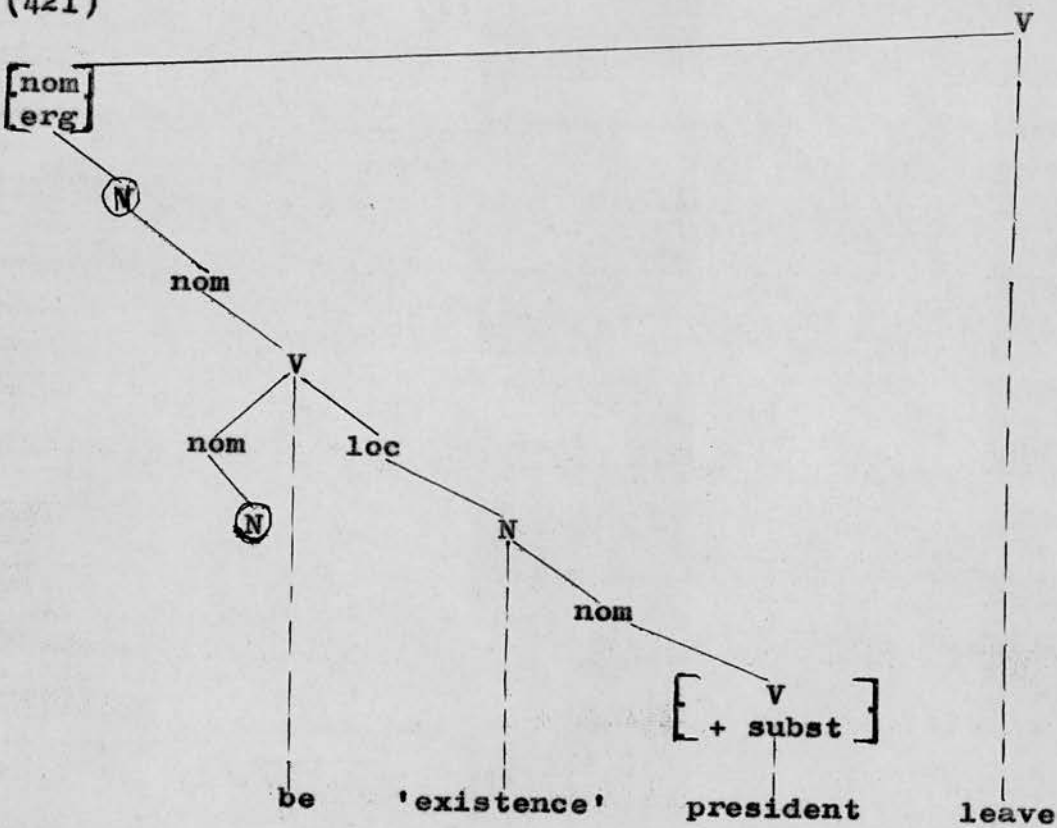


where the circled Ns are referentially identical. (A N which terminates a tree must be dependent (at some remove) on an identical N.) The identity can also be assumed to block abjunction. In this the two major functions of Ns (terms) are obvious: they provide a node to which lower predications can be attached, and they carry indexical information. Other semantic information originates (in the case of nouns as well as verbs and adjectives) with a predicate (V). The lower predication is contingent: we have oversimplified the representation by leaving out the tense predication which must come immediately above it (as well as the one which comes above the upper V). This tense-reference may be written out superficially, as in The former president left. Since the lower predication is contingent, the existential secondary predication is introduced, as in (420) (if, in the interests of economy of exposition we continue to ignore both tense predications):



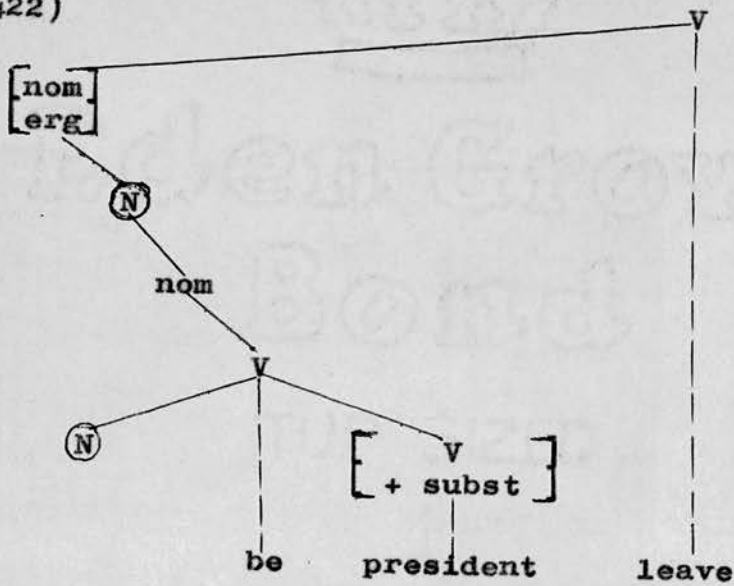
After attachment of the lowest V to the locative N and raising of its subject, there eventuates the structure in (421):

(421)



The existential locative is deleted, and the two noms in the second sentence are pruned, as in (422):

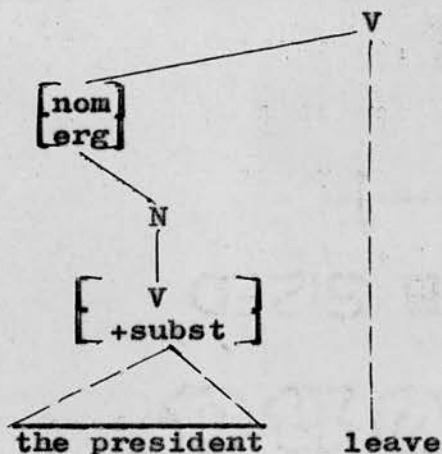
(422)



Now, by processes (whatever their precise character) familiar in the derivation of 'restrictive relatives' in general, the copulative V and the identical subject are deleted. All we need for this particular instance is a rule subjoining the lower V to the N (as opposed to say pre-posing with certain

[ + subst ] and [ - subst ] Vs):

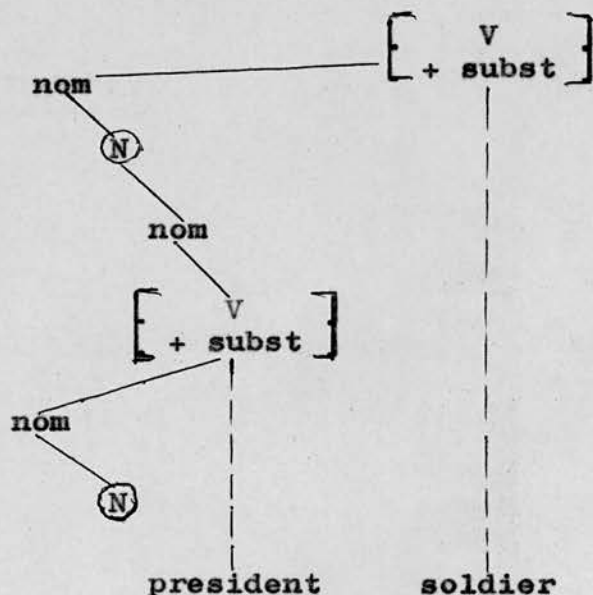
(423)



(We shall return to a brief consideration of the source of the 'article' in such instances in § 8.4.) Thus the derivation of a surface non-predicative noun involves the combination of a term (N) with a [ + subst ] V.

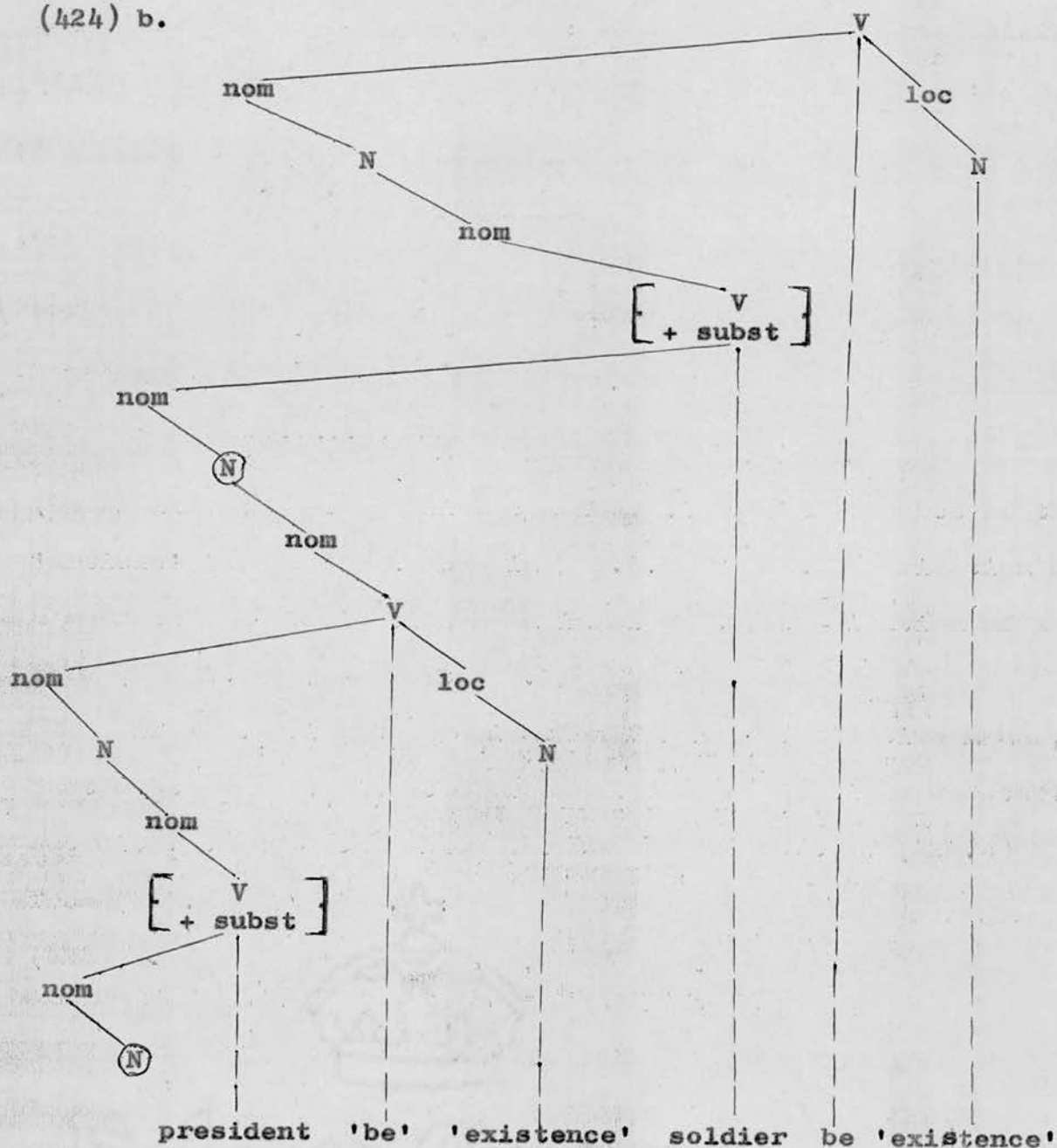
If we combine the derivation for non-predicative nouns, just sketched out with the proposal for predicatives we started out with, then we can allow for the development of (424.c) from (424.a) via (424.b):

(424) a.

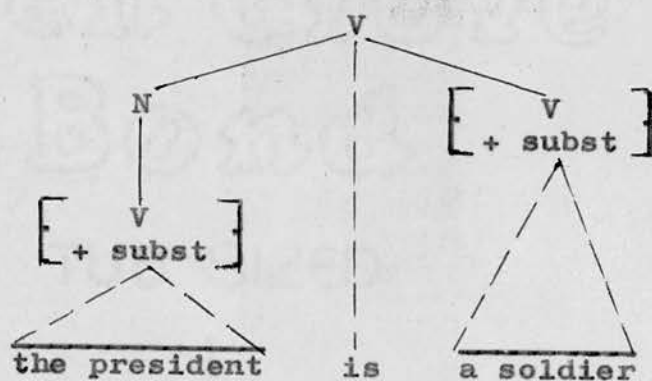




(424) b.



(424) c.



(I have ignored once again the two tense predications.)

Such an interpretation of nouns has two rather interesting consequences. Observe firstly that the separating off of the semantic content from the N makes the notion of an empty N that we have depended on for our analysis of various constructions

much less mysterious or idiosyncratic than might at first have appeared. An empty N is simply an N without an immediately dependent [ + subst ] V. Similarly, it now becomes clear that so-called 'selectional restrictions' are a particular instance of inter-predicate constraints in which the subject N of the lower predicate and the N on which the lower predicate is dependent are referentially identical.

#### 8.4. Supra-nominal nouns, and quantifiers

Thus Ns allow for referential relationships and embedding of Vs (via adnominal cases). I argued above in various places (in relation to causatives and aspectual predications) that three different kinds of adnominal case relation be allowed for. I want now to consider some further motivations for such a position, in this instance involving adnominal functions with an immediately dependent N rather than a V. And this will lead into a brief consideration, in the final part of this section, of some further characteristics of N, notably its role in structures involving quantifiers and numerals. These adnominal cases are frequently conflated in superficial representation (together with elements having their source in an embedded sentence) as a global adnominal case, usually labelled 'genitive'. I want now to consider the range of underlying adnominal functions we must posit.

Fillmore (1968 a: § 5) (as we noted in § 5.3 -- where other relevant discussions are referred to) has argued for the existence of adnominal locatives (including datives) representing the relation of 'inalienable (or inseparable) possession', notably 'possession of body-parts' (and their extensions) (Lyons 1968a: 300). In some languages, there is a 'morphological' reflexion of this relation, or at least of a (animate) subset of the instances. But, as Fillmore points out, there are

distinctive syntactic possibilities associated with underlying adnominal locatives even in languages where they are not distinguished in realization from other surface adnominals: consider again (174). I shall not repeat these arguments here.

Adnominal ablatives are distinctively represented in some languages in the form of a partitive inflexion. Thus, in Finnish, in which the partitive also has some adverbial uses (Eliot, 1890: 134) -- which are indeed apparently earlier (e.g. Wickman, 1955: 12) --, we find the following kind of example with the partitive in -a/ä (Eliot, 1890: 134-5):

(425) a. joukko ihmisiä ('a crowd of men')

b. paljon rahaa ('much money')

(See too Setälä, 1926: 20-2.) The governing (quantifier) noun may in certain circumstances be deleted, as in Leipää on pöydällä ('Some-bread is on-the-table'), but the verb will continue to be in the singular even if the partitive noun itself is in the plural. This is not the case with the French so-called 'partitive article'; otherwise it would seem to presuppose the same derivation as the Finnish partitive. (In English, rather than the governing noun, the partitive element itself is normally deleted unless the dependent noun is definite: some of the cheese/some cheese.) Other instances of surface partitives are noted in Gray, 1939: 243-4; Jespersen, 1938: 180-2, Lehiste, 1969: 327-8.

In French the partitive, or adnominal ablative, is represented in the same way as other adnominals; in Finnish, it is distinguished from the general adnominal case, the 'genitive'. This latter, however, conflates the adnominal locative with adnominal elements reduced from sentences, as well as with adnominal nominatives like the first part of Helsingin kaupunki ('The town of Helsinki'). In English, all three adnominal relations can be represented by of (though note the restriction with animate locatives: \*the leg of John). But neither the



(adnominal) loc or nom appears in the -s + N construction in English: part of the cheese/\*the cheese's part; the city of London/\*London's city. And in some instances (varying from language to language) the nominative (or 'appositive' or 'determinative') relation can be expressed by simple juxtaposition. Compare the a and b instances in respectively English and Finnish:

- (426) 1. a. The city of London  
           b. The river Thames  
       2. a. Nevan joki (genitive) ('The river Neva')  
           b. Neva joki (nominative)

In Serbo-Croatian, for instance, the adnominal in such examples would agree with the governing noun in case. Some of these instances may indeed be derived; but it would be difficult so to consider an example like the 'direct object' in We gave him the name (of) Fred.

Languages apparently differ also in the degree to which they admit or require 'dependency inversion' with the various adnominal constructions. Consider Collinder's (1957: 188-9 -- cf. 1949: 27) comparison of English and Lappish in this regard:

- (427) In the English expression two tents, tents is regarded as the principal word and two as attribute... In Lappish, the equivalent of the English principal word is put in the genitive singular after the cardinal number.

It is not, however, certain how well-founded are such observations concerning English.-- But I shall not pursue this question here.

The notional differences between these adnominal constructions are clear, if somewhat difficult to formulate in certain respects, and, I suggest, appropriate (along with the morphological evidence) to the functional distinctions we have drawn: nom vs. loc vs. abl. The two Ns joined by nom are referentially identical; with loc and abl we have rather referential inclusion

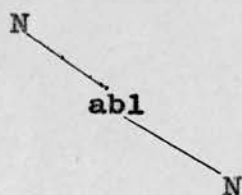


of the governor by its dependent. With respect to this 'part-whole' relation, the locative and ablative instances differ in something like the extent to which the governor is normally considered to be separable from its dependent. (Observe that part indeed may take either an adnominal locative or partitive.)

Thus, the same variety of adnominal case elements that was proposed in our account of various causative and aspectual constructions is also required by the grammar of adnominal case phrases with an immediately dependent N. I think indeed that it can be argued that the 'lexical' elements N and V are always 'linked' in underlying representations by some functional element. What remains uncertain is whether an adnominal erg can be motivated (or whether all surface adnominal ergative phrases represent reductions from (dependency on) an adnominal V -- i.e. an embedded sentence); and, if it cannot, what is the explanation for this restriction.

While it therefore seems to me that such a proposal for partitives, in particular, is consonant with a range of phenomena from different languages, the suggestion that a quantifier originates as a N immediately governing an ablative phrase containing another N -- i.e. in a structure like that shown in (428):

(428)



is apparently in conflict with another, well-known and in many ways attractive proposal that quantifiers originate as higher predicates. I am thinking in particular of the analyses recently offered by Lakoff (e.g. 1970, forthcoming), whose precise formulation owes something to objections raised by Partee (1970) to earlier proposals of his (Lakoff, 1965: App.F).

Lakoff argues that in sentences like (429):

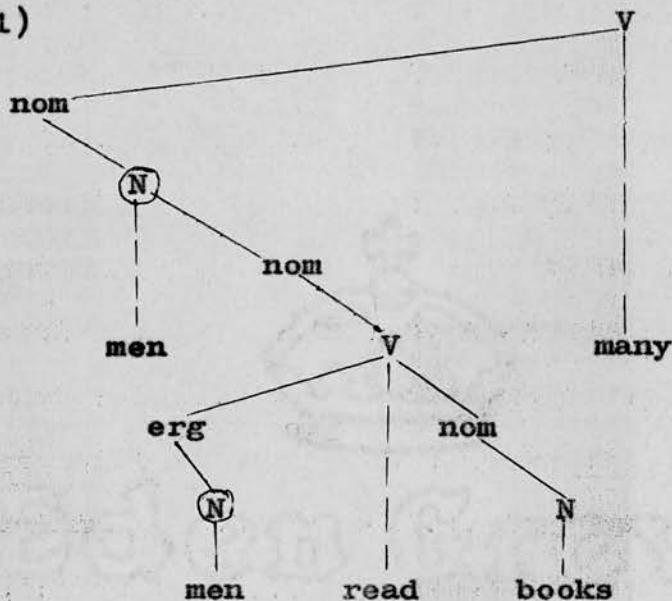
(429) Many men read books

the quantifier many originates as the predicate of a higher sentence, and that an alternative (though 'archaic') variant is (430):

(430) The men who read books are many

in which the predicative and superordinate status of many is apparent. (429) differs from (430) with regard to the operation (in the case of (429)) of a rule of 'quantifier-lowering' (henceforth QL), whereby the quantifier is 'lowered onto' the NP in the subordinate clause which is identical to its original subject (in the higher clause), as indicated in (431):

(431)



(Erg = ergative.) The circled Ns are <sup>once again</sup> referentially identical. Many is thus lowered on to the subject phrase in the subordinate. What the character of the derived structure is (and what becomes of the higher nominative phrase -- apart from an apparently ad hoc deletion) remains uncertain.

If something like this derivation is well-motivated, then it would appear to be rather difficult to reconcile with my proposal for some, many etc., which claims that they involve crucially an underlying partitive relation in which many in (429) would immediately govern an ablative phrase containing men.

In what immediately follows I shall try to show two things: firstly, that my analysis can be reconciled with such a derivation for some quantifiers (and that this restriction has some support); and secondly, that there is no reason to believe that the derivation Lakoff proposes is correct (even for this restricted set of quantifiers).

If we assume that QL is, in some form, a valid explanation of the relation between (430) and (429), there is nevertheless no motivation for extending it to quantifiers like some, for whom there is no example bearing to (432) the relationship that (430) bears to (429):

(432) Some men read books

Various arguments intended to justify QL for quantifiers in general that have been proposed by Lakoff merely show the necessity for assuming some kind of superordinate clause with a quantifier, rather than specifically a clause containing a predicative quantifier. -- I shall take up these arguments in a moment. If we nevertheless persist in claiming that QL has occurred in the derivation of (432), we must explain (not merely label) why it is that there is no surface variant containing some like (430). This can be explained with reference to the analysis of quantifiers as supra-nominals, but only if QL is restricted to those quantifiers which appear in predicative position in sentences like (430).

Consider the paradigms in (433):

- (433) A. 1. a. Many men read books  
           b. The men who read books are many  
       2. a. A large number of men read books  
           b. The number of men who read books is large  
       B. 1. a. Some men read books  
           b. -  
       2. a. A number of men read books  
           b. -



From this it appears that the many sentences are paraphraseable by sentences involving large number; but some is paralleled by number alone. And whereas the sentence with a superficially superordinate many (A.1.b) is paralleled by A.2.b, both b instances under B are unfilled. Now, they are unfilled, provided that we assume a common source for B.1 and B.2, because in the composition of neither of them is a predicate (like large) involved. The b instance with superordinate many is possible because underlying it there is both a N (realized in A.2 as number) and a V (realized in A.2 as large). That is, the derivation of many involves both a supranominal N (consonant with the analysis of quantifiers I have proposed) and a high V (as required by Lakoff's interpretation). We merely have to assume that many is the shape assumed by large if number is superficially absent, just as a lot of is apparently another variant in which the V has been subjoined (lot = large + number). Compare a few/a small number. Observe too that all is presumably the variant of some with which the supra-nominal and sub-nominal Ns are referentially identical. (But see further below.)

However, having established the compatibility of the supra-nominal analysis of quantifiers, with a trimmed version of Lakoff's proposals (involving restricted QL), we must now presume to look the gift-horse squarely in the mouth. This is because it seems to me that a potentially important principle is at stake in the acceptance or rejection of Lakoff's analysis. It is not my intention to question the assumption that a higher predication containing a quantifier is involved in the derivation of (429) or (432) -- or indeed of any quantifier except all (and related forms). Rather, I shall argue against the notion that the quantifier is underlyingly the predicative element in this superordinate (even in



instances like (430)), and I shall propose an explicitly different, but, I would contend, semantically more appropriate character for the higher clause.

Let us consider what arguments can be assembled for the notion that underlying (429) etc. is a structure containing a predicative quantifier in a superordinate sentence.

Firstly, and weakly, there is the existence of paraphrases like (430). However, as we have observed, these are not found with all quantifiers. It is specifically only those quantifiers which, under the proposal made immediately above, consist of a supra-nominal N and a V that show such a variant. We might then, following this argument, weaken our proposal concerning the superordinate and predicative character of quantifiers to the following: certain quantifiers (like many, few but not some, all) are derived from the collapsing of a supra-nominal N and a higher V. These are the quantifiers that can also be attributive (cf. Lakoff, 1970: 401-2; Carden, 1970); we can once more associate this possibility with their internal structure, but I shall not explore their derivation (presumably from a non-restrictive relative) here. They are also the quantifiers that can be compared (more, fewer), which again depends on assuming a predicative status.

However, on the one hand, the relating of (430) and (429) by restricted QL still depends on the postulating of a rather bizarre and complex rule with unspecified output. And I shall show below that one can, on the contrary, allow for the raising of the <sup>predicate</sup>~~quantifier~~ by an independently motivated rule. On the other hand, Lakoff has adduced a number of pieces of evidence to show that some kind of superordinate clause is required in the derivation of all of (429), (430) and (432). And the restriction of QL to (429) (excluding (432)) takes us even further from explaining this. I want

now to look at some of this evidence, which Lakoff claims as support for the superordinate predicative analysis of quantifiers but which I shall argue merely shows that the quantifiers occur in some kind of superordinate sentence.

Lakoff (1970, 398) points out there are sentences with some parallel to the pair with a few adduced by Partee, reproduced in (434):

- (434) a. Few rules are both explicit and easy to read  
 b. Few rules are explicit and few rules are easy to read

which are similarly non-synonymous -- as compared with (435):

- (435) a. The few rules are both explicit and easy to read  
 b. The few rules are explicit and the few rules are easy to read.

And he argues that this is explained if QL is extended to some. But it is accounted for by any proposal in which the quantifier appears in a superordinate sentence. Thus, this observation is merely compatible with the (unrestricted) notion of QL; it does not constitute positive evidence for the superordinate predicate analysis of quantifiers.

Lakoff (forthcoming: § 2) also takes up the sentences in (436) discussed by Partee (1970):

- (436) a. Many men read few books  
 b. Few books are read by many men

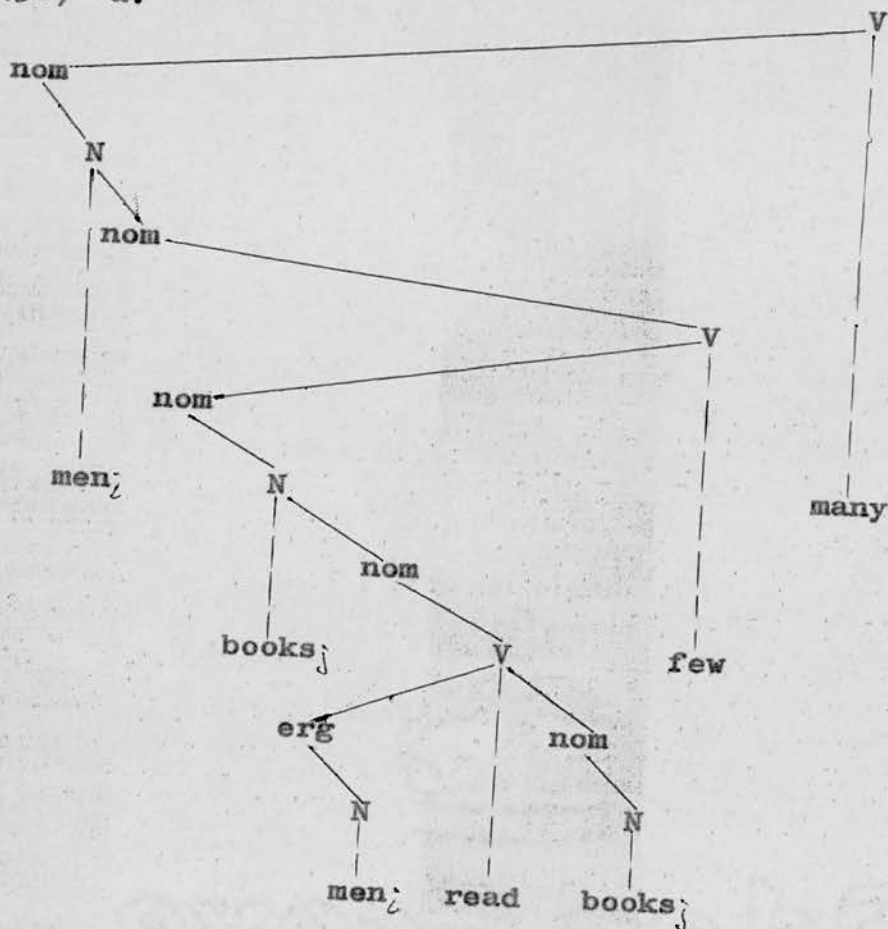
These again are not synonymous. Lakoff provides (significantly, as it will appear) the following paraphrases for (436.a) and (436.b) respectively:

- (437) a. There are many men who read few books  
 b. There are few books which are read by many men.

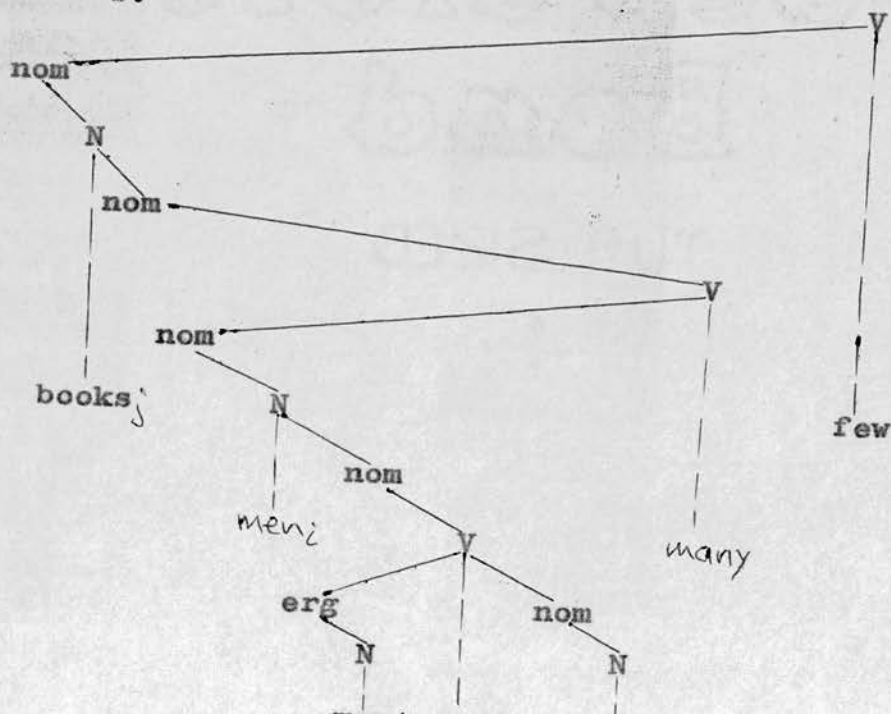
He proposes that underlying each of (436) is a structure including three predications (relevant to the present discussion). The same predications are involved in either

instance, and men read books is the lowest in both. They are differentiated in that in the configuration underlying (436.a) the topmost clause predicates many of men, and the second few of books, whereas with (436.b) the relative heights of these two predications is reversed. This is shown in (438), (438.a) underlying (436.a) and (438.b), (436.b):

(438) a.



b.



(in which the Ns enclosed in the same geometric figure are referentially identical). In (438.a) many commands few, but not few many; in (438.b) the asymmetric command relation is reversed. Lakoff explains the absence of a passive variant for (436.a) and an active for (436.b) (as we noted, these are not related as active to passive) with regard to a global derivational constraint, such that if the lower (commanded) quantifier comes also to command the commanding quantifier, then the originally higher must assume leftmost position. Thus (436.a) has no passive realization, in that it would infringe this constraint; and correspondingly (438.b) has no active.

Notice, however, that these considerations also provide no evidence for an underlying superordinate predicative status for many and few. They do not even show that there is more than one predication above men read books. There is certainly no surface variant of (438) with three overt predications of the type proposed. And the presence of the intervening predication is not necessary to the formulation of the constraint. There is, as we have observed, a variant of (429) with bi-predicational structure, namely (430). And there are such variants corresponding to (436.a) and (436.b), namely (439.a) and (439.b) respectively:

(439) a. The men who read few books are many

b. The books which are read by many men are few.

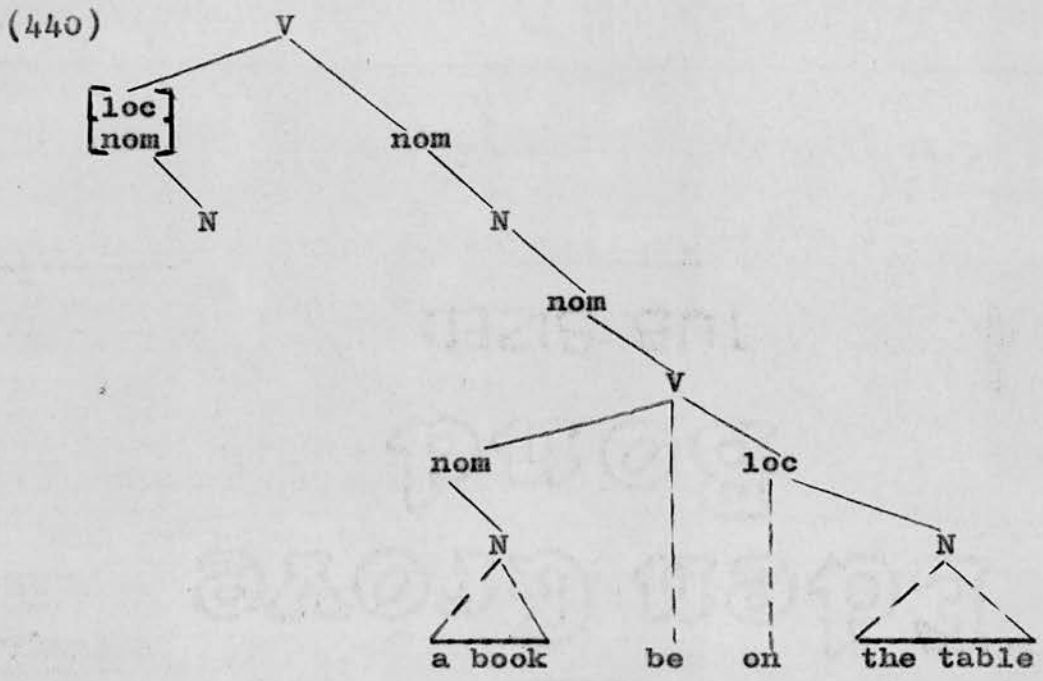
But observe these two points. In the first place, there is no surface reflexion of the intermediate clause in either instance, unless one believes that all such quantifiers are derived by QL. Secondly, Lakoff simply identifies the topmost predications in the structures he proposes as underlying (436) with the corresponding surface clause in (439).



In the discussion that follows, I shall argue in favour of four points: (i) there is no reason known to me for positing the intermediate predications in (438); (ii) the (remaining) higher predication is of a character quite different from that suggested by Lakoff, in that, in particular the quantifier is not a superordinate predicate; (iii) the variants in (439) are accordingly rather further from the underlying structure than they are in terms of Lakoff's analysis; (iv) the rule of QL can as a consequence be dispensed with in favour of independently established processes.

Point (i) is established if we can provide plausible derivations consonant with the requirements of the derivational constraint and other evidence which do not require the presence of such a clause, which, after all, involves us in somewhat strange relative configurations. However, the discovery of evidence for some kind of intermediate predication would not affect the other proposals listed under (ii)-(iv), provided that this intermediate predication were structurally like the higher predication I am going to suggest occurs in the structure underlying (429) etc. I intend now to outline some indications of what this higher predication might be. We shall then consider the processes which lead to the surface representations manifested in (429), (436) and the like; and finally the variations of these which eventuate in (437), (439) etc. Having given some consideration to the alternative source and derivation I am proposing, we shall be in a position to consider one further argument for QL, which I shall show is once more inconclusive.

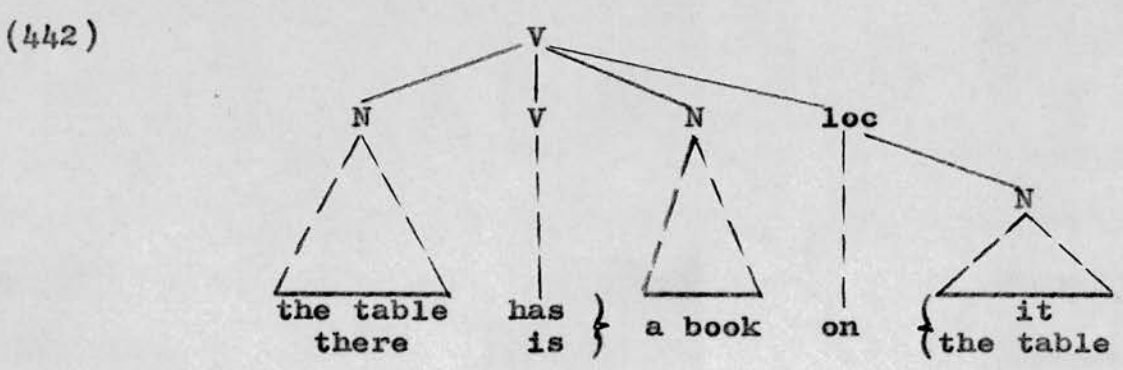
Return now to (437). Here we have instances of the there is... construction, which occurs above copulative locational predications (cf. ch. 6) like that in (440):



Both upper Ns are semantically empty: they have no attached substantive predicate. After abjunction, copying thus results in reversal of the original sequence: the lower locative is copied into subject position, the lower subject is copied on to the upper nominative. The lower subject is deleted, and if the lower locative is pronominalized, we get (441.a), if the upper, (441.b):

- (441) a. The table has a book on it  
b. There is a book on the table.

There is only one V present in surface structure: I have assumed this is due to subjunction of the lower V to the upper. The surface representation is perhaps as in (442):



(wherein the various nominative nodes have been removed by 'subject/object pruning').

In 'existential locatives' -- i.e. where location is

predicated absolutely and not limited to a particular place -- there occurs an existential PRO-locative that can in such constructions be eventually deleted. Compare once more:

- (443) a. There are lions in Africa  
 b. There are lions (in existence)

In this instance, there may be no superficial indication whatsoever of the lower locative predication, though there is a lexical reflex in Lions exist, in which the existential locative has been subjoined to its governing V.

Now, the sentences in (437) show a there is... construction with no reflex of the lower locative. We can allow for the relevant aspects of their surface structure if in these instances too an existential predication comes immediately below the there is. That is, there intervenes between the latter and the 'main clause' an existential predication whose locative phrase has been deleted and whose verb is subjoined to the upper V. Notice that we also find paradigms with non-deleted locatives, as in (444):

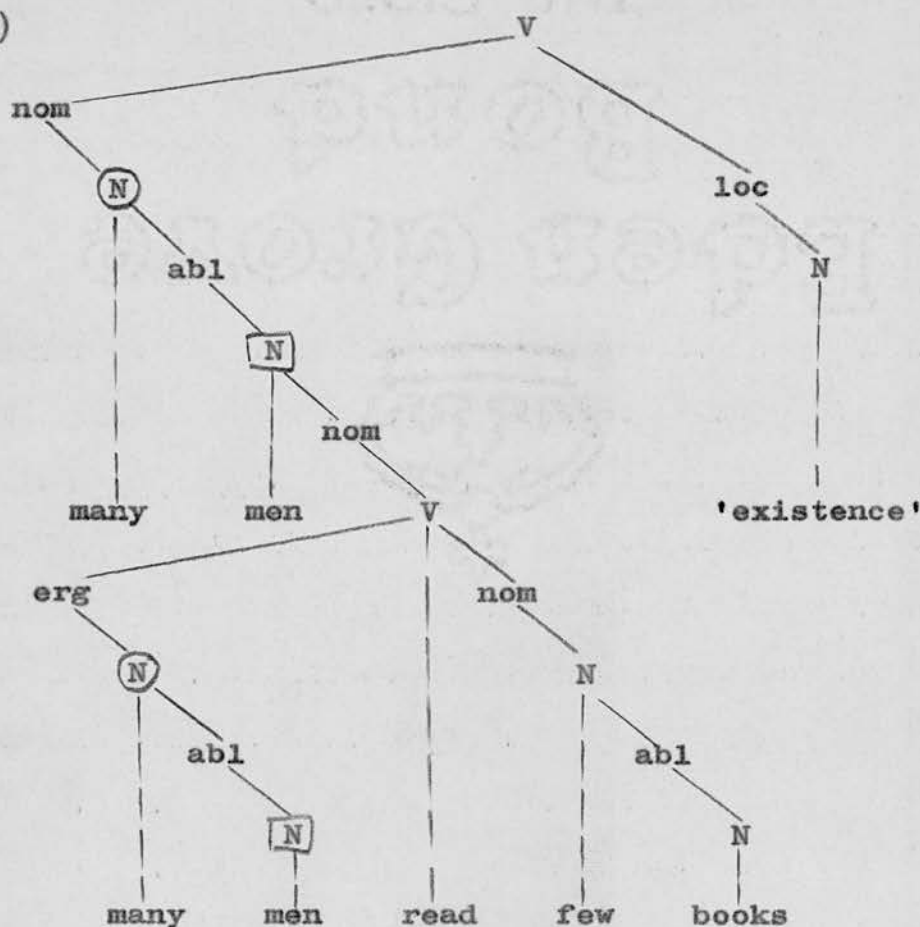
- (444) 1. a. Many men in our street read few books  
 b. There are many men in our street who read few books  
 2. a. Few books in our library are read by many men  
 b. There are few books in our library which are read by many men.

However, at this juncture the question arises: what in (437) is existence, or location, predicated of? -- Clearly, of the leftmost quantifier phrase: i.e. of many men... in (437.a) and of few books... in (437.b). It is this which distinguishes them semantically. In (437.a) the existence of many men such that they read few books is asserted; in (437.b) the existence of few books such that they are read by many men is asserted. But this same distinction is what separates (436.a) from

(436.b) as well. (437) differ from (436) on in the presence of the there is... predication: they differ as There are lions in existence differs from Lions exist. In both pairs there occur the same alternative existential assertions.

Thus, underlying (436.a) (and (437.a) -- if we ignore the there is... construction) is a structure like that in (445):

(445)



(Once again, the circled Ns are referentially identical; similarly, the squared Ns, which by definition include referentially their governing Ns.) Underlying (436.b) (and (437.b)) is rather a structure in which existence is predicated of few books. As under the superordinate predicate analysis, the absence of a passive corresponding to (436.a) and an active to (436.b) is attributable to Lakoff's constraint on mutually commanding quantifiers (as we shall see when we come to look at the subsequent development of (445)) -- though it must be reformulated somewhat to allow for the fact that one of the quantifiers now occurs twice in the underlying



representation, and only one of these instances commands and is not commanded by the other quantifier.

I want now, before proceeding to investigate the subsequent history of (445), to indicate that such an existential predication occurs not only above many and few but also above predications containing any non-generic non-attributive quantifier, including cardinal numerals, including a (in those instances in which its presence is not simply due to an output condition -- cf. Perlmutter, 1970). Compare with (437) the following:

(446) a. There are  $\left\{ \begin{smallmatrix} \text{five} \\ \text{some} \end{smallmatrix} \right\}$  men (in our street) who read (many) books

b. There is a man (in our street) who reads (many) books.

I claim that these are related to the corresponding sentences in (447):

(447) a.  $\left\{ \begin{smallmatrix} \text{Five} \\ \text{Some} \end{smallmatrix} \right\}$  men (in our street) read (many) books

b. A man (in our street) reads (many) books

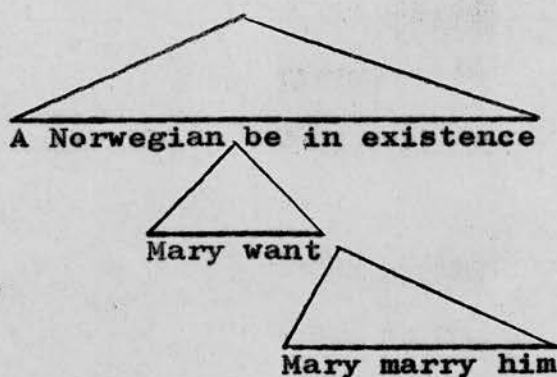
(though (447.b) without the bracketed in our street is somewhat marginal) in the same way as (437) are related to (436). The important exception to this is all -- perhaps because in its case the establishment of the existence or location of a subset is tautologous (given its analysis in terms of referential identity of the set and subset). -- For an alternative account, with all as a 'double negative', see Anderson, 1971e.

Thus, above the 'main' clause of all of (446)-(447) is a clause predicating existence or location of the (leftmost) quantifier. Observe that such a proposal also resolves the existential status of Mary's unfortunate Norwegian (cf. Bach, 1968). The two interpretations of (448) differ as to whether the existential predication comes above the want or the marry clause:

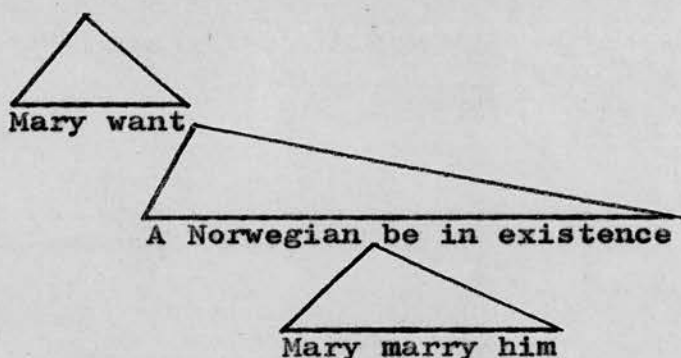
(448) Mary wants to marry a Norwegian

as indicated in outline in (449.a) and (449.b) respectively:

(449) a.



b.



In (449.a) the co-referential N comes within a complement sentence embedded in the clause below the existential rather than that clause itself -- and of course this possibility for relatives must be allowed for anyway. This distribution is confirmed by the paraphraseability of the (449.a) interpretation of (448) by (450.a) and the (449.b) interpretation by (450.b):

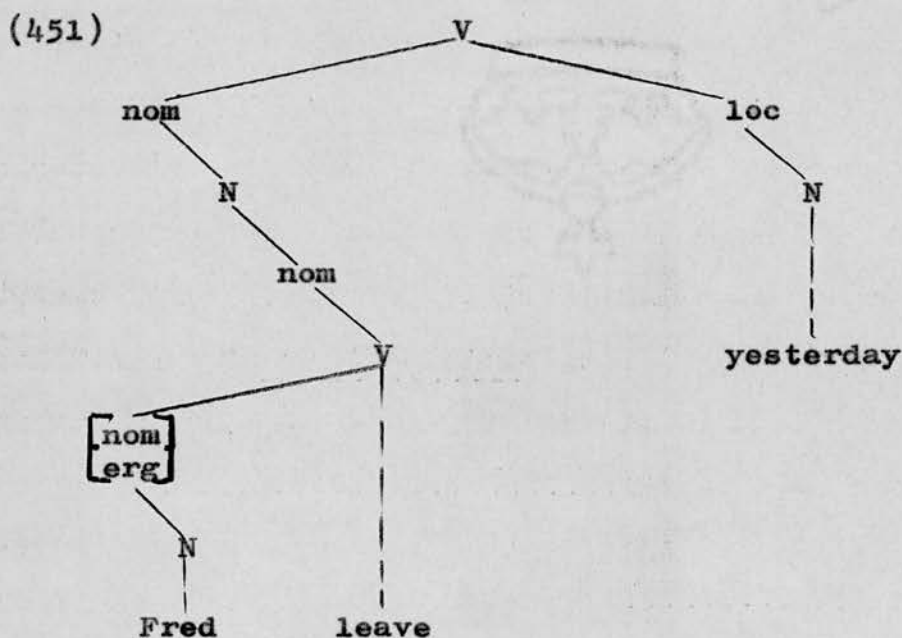
(450) a. There is a Norwegian who(m) Mary wants to marry

b. Mary wants there to be a Norwegian for her to marry in which the there is... predication comes in each instance immediately above the existential.

The account I have offered assumes that only one quantifier in any simple predication is associated with a higher locative structure (and if its originally higher occurrence comes to be commanded by another quantifier, it will precede that quantifier). I remain rather diffident concerning this particular aspect of my proposals. But I am unaware of any crucial evidence for more than one existential predication in such instances. Moreover the

positing of intervening predications would somewhat complicate the otherwise well-motivated derivation I shall propose for those structures, in involving the unusual relative constructions shown in (438).<sup>1</sup>

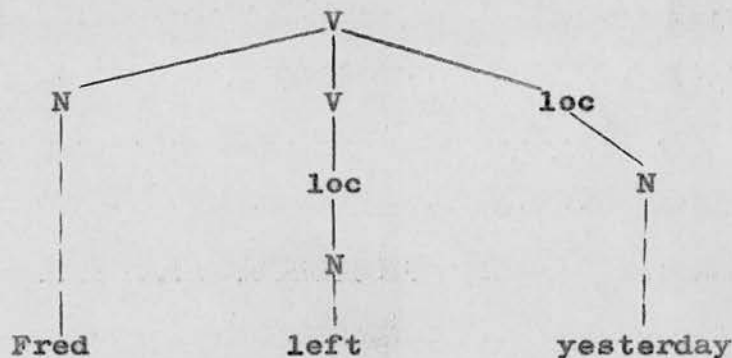
Consider now the subsequent development of (445). I want to approach a discussion of this rather indirectly. Recall the operation of the processes involved in the derivation of tense which we discussed above (in ch. 7). The structure of the higher predication in (445) (though not the internal structure of the Ns) is exactly that I have proposed for higher temporal predications. Compare (451), which underlies Fred left yesterday:



1. Notice, in passing, that instances with two universal quantifiers, like Everyone liked all of the books, do indeed, in terms of the analysis of every/all suggested in Anderson, 1971e, presuppose underlying structures containing two higher existential predications, ~~but these are apparently coordinate, as indicated by the following rough paraphrase: 'There was no one and there were none of the books such that he didn't like them'.~~

The subsequent development of (451) involves abjunction, copying of the lower subject on to the upper and deletion of the original. The lower V is subjoined to the upper, and a copy of the locative phrase is also subjoined to the upper V (though without deletion of the original) -- I shall term this for the present discussion 'tense-marking'. These processes result (after pruning) in (452):

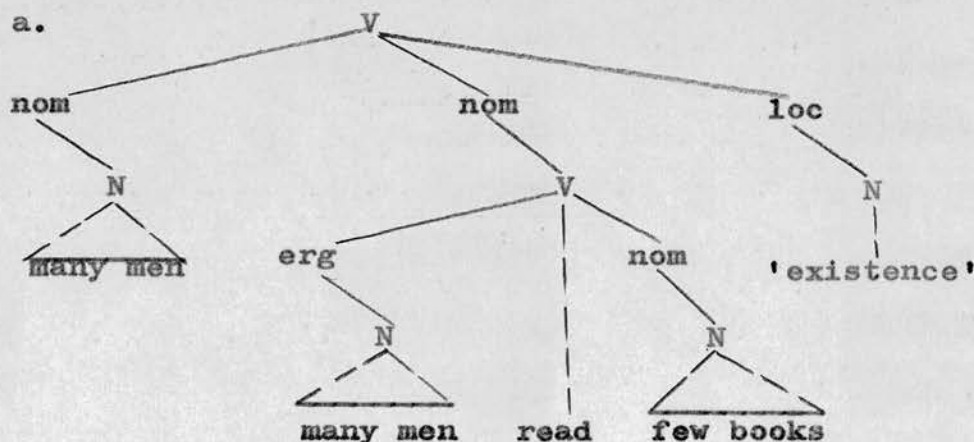
(452)



Notice incidentally that, given the analysis of the structure of nouns suggested in this chapter, we can now say that what is copied is the time-referential N (the term) but not its dependent, predication -- i.e. (roughly) 'pastness' but not 'one day away from the day of locution'.

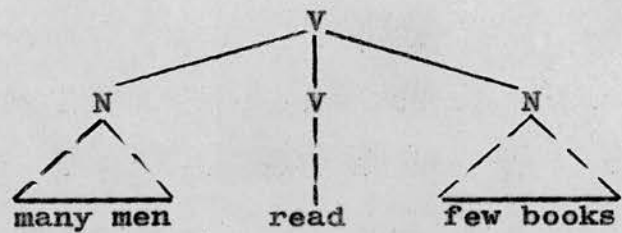
The derivation of (445) eventuating in (436.a) can be exactly parallel to that I have described, with two minor differences: there is no tense-marking (since the locative phrase is not indexed for time) and the existential locative is (as elsewhere) deleted. This development is outlined in (453), which takes as its starting-point (445):

(453) a.





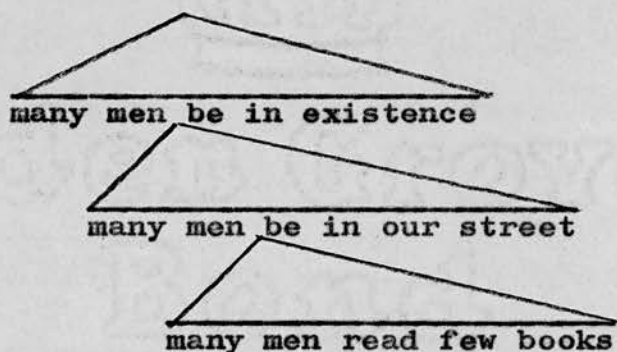
(453) b.



One other difference is that the upper subject is not derived by copying; it is identical from the start. The result is the same, and the lower subject is in both instances deleted, leaving the identical upper subject (whatever its source). An analogous derivation can be sketched out for (436.b), but with the additional operations required by the passive.

An interesting dilemma now arises with regard to sentences with overt locative, like (444) or (446). Thus far we have assumed a requirement that any one quantifier in a simple sentence presupposes a higher existential predication with the quantifier phrase as subject. If we generalize to instances like (444), then underlying them must be a structure like that in (454):

(454)

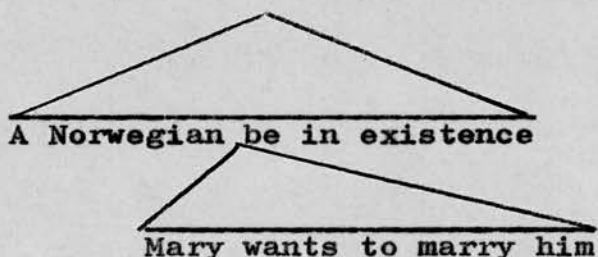


Similarly, with (441) an existential predication will intervene between the there is... clause and the locative predication. The alternative, given that we have interpreted existentials as a type of copulative locative predication, is to formulate the requirement, informally, as follows: a quantifier in a non-copulative locative sentence presupposes a higher locative predication in which the quantifier phrase is subject. Observe that this does not exclude existentials above other copulative locatives -- which possibility is

required by There are few students who are in many classes.

I do not know of any crucial empirical evidence bearing on this decision. However, the different 'behaviour' of quantifiers in copulative locative sentences, such that e.g. on one reading There are few students in many classes and Many classes have few students in them are synonymous, whereas there is a reading for the first which is not (but is like There are few students who are in many classes), tends to support the latter alternative. Rather, the need for a reformulation of the global constraint is suggested. However, I shall not investigate this here.

The derivation of sentences in which the existential quantifier does not appear in subject position is more problematic for such an interpretation. Consider again (448), under, say, interpretation (449.b). Here, we would arrive, in terms of the kind of derivation I proposed for (445), at a derived structure like that abbreviated in (455):



From this point, a straightforward relative development occurs in the derivation of (450.a). But how do we arrive at the structure manifested as (448)? Let us consider the structure of relatives a little more closely.

The relative configuration involves necessarily (whatever other restrictions may be appropriate) an 'antecedent' N which has subordinate to it within a dependent predication a N which is 'identical' in some (including at least referential) sense. Relative-formation involves the substitution of a relative pronoun for this identical N-configuration (or a

clause initial replica of it). However, in the derivation of (448) abjunction destroys the relative structure, and no relative pronoun can be substituted. The originally subordinate N is thereby 'stranded'. In order to resolve this we need a rule which superimposes the original antecedent on to this term. This results in the structure immediately underlying (448). This last step might appear to be as ad hoc as QL; but there are reasons for thinking that a similar process may be required elsewhere in the grammar.

The following paradigm, in particular, has often been observed:

- (456) a. What I read was a novel  
       b. It was a novel that I read  
       c. I read a novel

(with contrastive stress on novel in (456.c)), all of them serving to focus on novel. Now, Akmajian (1970) has argued that (456.b) be derived from a structure like that underlying (456.a) by extraposition. (456.a) is a relative construction; thus, the effect of extraposition would be once more to strand the potential relative pronoun, unless relative-formation had already taken place, as indeed it has in (456.b). Abjunction, however, precedes relative-formation, and, as we have seen, does result in stranding. We can allow for (456.c) as deriving from the same source if we take it as the instance in which abjunction and thus stranding occurs prior to relative-formation. Once again (cf. 455), this is resolved by superimposing a referentially identical phrase from the upper sentence (a novel) on to the 'stranded' term. (Cf. Postal's 'contrast movement' (1971, ch. 19).) This leaves in the original upper predication an empty N (realized in (456.b) as it) and the copula. Presumably, as elsewhere,



the empty N is filled by the lower subject (the original being deleted) and the lower V is subjoined to the copula. This produces the structure immediately underlying (456.c).

This same derivation is also available to existential quantifiers which come to occupy subject position. It therefore seems preferable to interpret their development thus rather than as involving an extension of complement subject deletion to just subjective stranded relatives.

We can now take up a further set of phenomena which apparently support the superordinate predicate analysis of quantifiers. And this concerns the restrictions connected with phrasal conjunction discussed by Lakoff, 1970, 411-9. He observes that while (457.a) is well-formed, (457.b) is not:

(457) a. Few men and many women left

b. \*Few men and many women left together.

Moreover (458) is ambiguous between a phrasal conjunction interpretation and sentential conjunction.

(458) John and Mary left.

(457.a) permits only the sentential conjunction interpretation; and (457.b), which is marked as phrasal by the presence of together is ill-formed. Finally, (459), which (according to Lakoff & Peters, 1969) is derived from a phrasal conjunction via conjunct movement:

(459) Few men left with many women  
is grammatically well-formed.

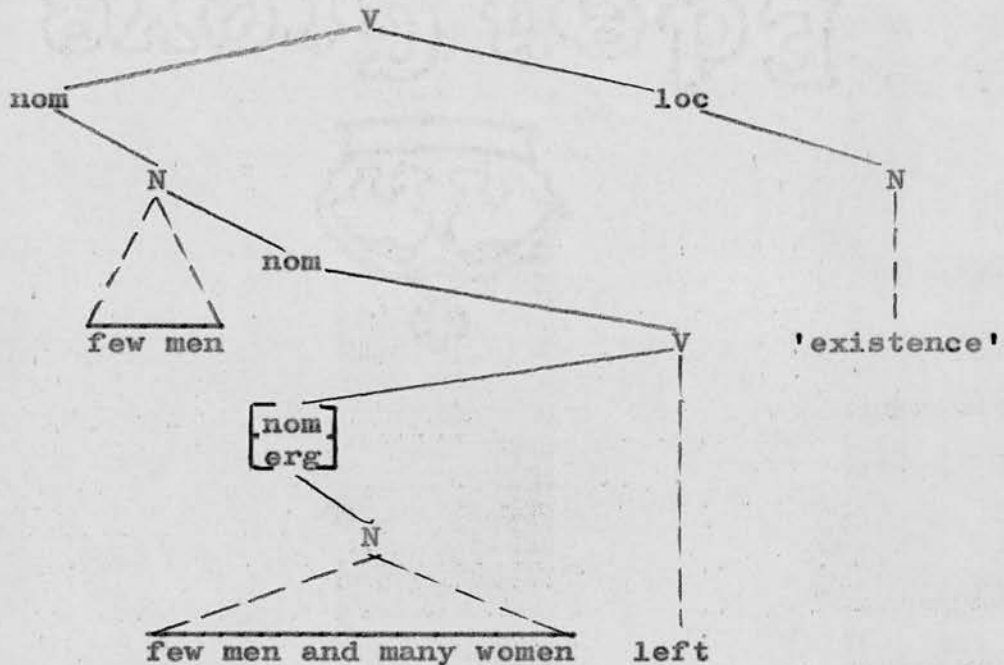
Lakoff proposes to explain this in terms of the interaction of QL and Ross's coordinate structure constraint. In the derivation of (457) with phrasal conjunction the lowering of the quantifier into the coordinate structure is blocked by Ross's constraint. If, as in the derivation of



(459), the conjunction has been broken up by the operation of conjunct movement, Ross's constraint does not apply and QL may proceed. Thus, the explanation of the restrictions in (457)-(459) depends on the existence of QL (together with an independently motivated constraint).

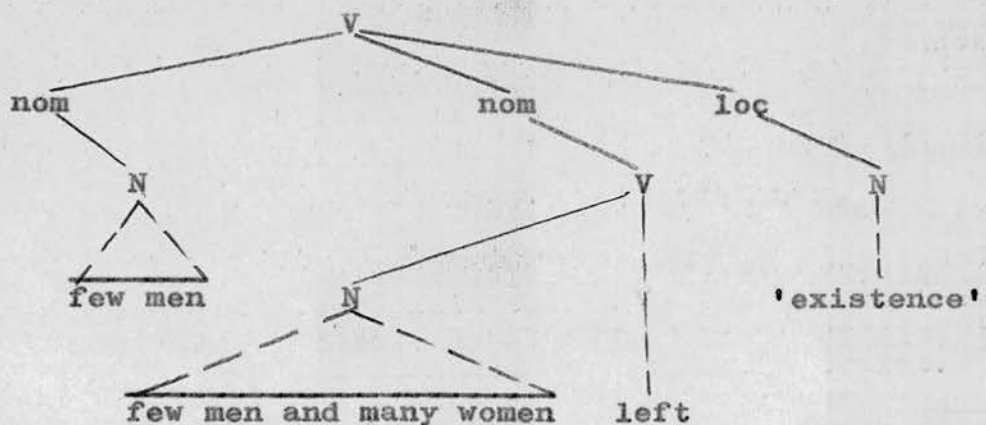
However, again it seems to me that this evidence is inconclusive. Consider the kind of derivations required for these sentences in terms of the account I have proposed. Underlying (457.b) and (459) is a structure like that in (460):

(460)



After abjunction we get (461):

(461)

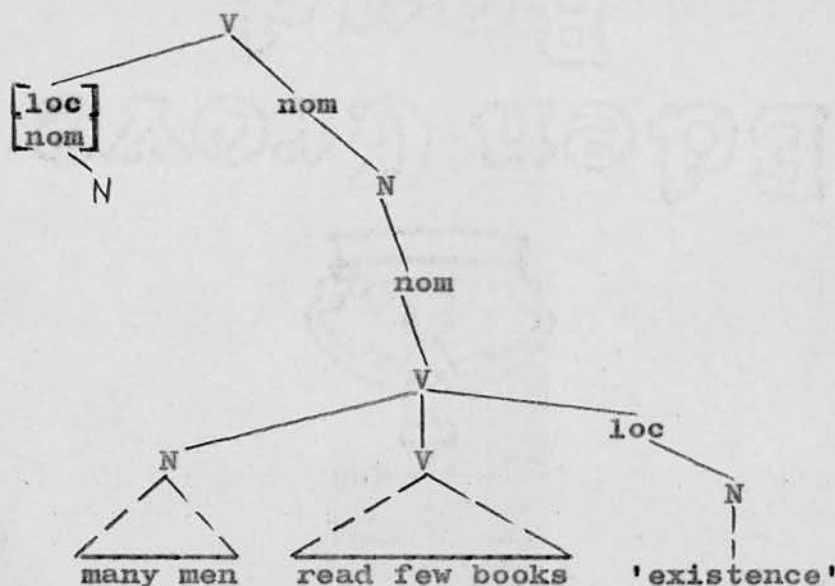


Observe that the lower subject is not identical to the upper; it is only if conjunct movement has applied (as in (457)) that identity is ensured and the derivation can proceed under the

first interpretation I considered above. Under the second (and preferred) alternative, Ross's constraint will in this instance too block the subsequent development. Thus such phenomena provide no support for a predicative analysis of quantifiers.

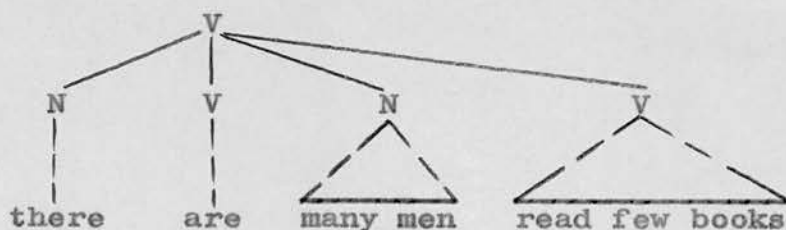
If a there is... predication comes above the existential, then the derivation can either develop as outlined above, up to and including subjunction, resulting in (462):

(462)



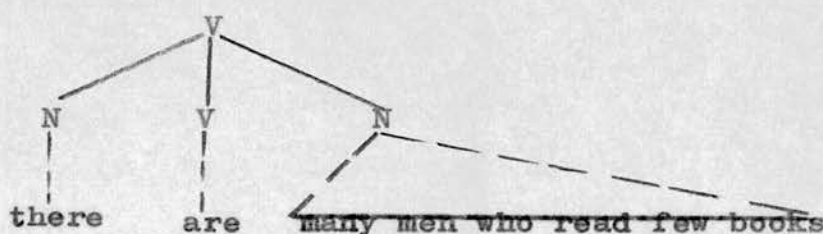
which, after abjunction, copying, deletion of the existential phrase and subjunction of the intermediate V to the topmost one, eventuates in (463):

(463)



or there may be no movement of the lower V but simply deletion of the existential phrase and the formation of a straightforward relative, as in (464):

(464)



(463) immediately underlies (465.a) and (464), (465.b):

(465) a. There are many men read few books

b. There are many men who read few books.

If in the derivation of (463), the existential V is (as elsewhere) subjoined to the V in the there is... clause, then it must be possible to detach it from the read V subjoined to it on the previous cycle.

Unless one supposes some such derivation for (465.a) the absence of a relative pronoun remains unaccounted for. Observe too that such variants as (465.a) appear to be a general phenomenon with quantifier predications:

(466) There {were five women  
          {was a woman } followed me this morning.

I conclude that their existence provides some support for the development for (445) I have proposed and for the appropriateness of that representation.

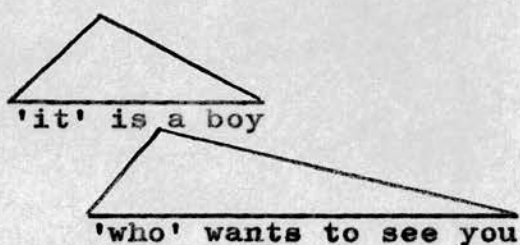
Note too that we also find such a variant with clefts, as in (467.b):

(467) a. It's a boy who wants to see you

b. It's a boy wants to see you.

As noticed by e.g. Bever & Langendoen (1971: 442), these are, along with there is... sentences, the sole instances in which in Contemporary English the subject relative can be 'omitted' (though even these variants are 'archaic' for many speakers). Significantly, they are also the other instance in which we suggested that relative stranding was involved. Thus, underlying (467.b) is, after V-adjunction, the structure abbreviated in (468):

(468)



A boy is superimposed on the stranded relative (indicated by 'who' in (468)). If copying of this lower subject on to the upper and subjunction of the lower V follow, then we get rather A boy wants to see you.

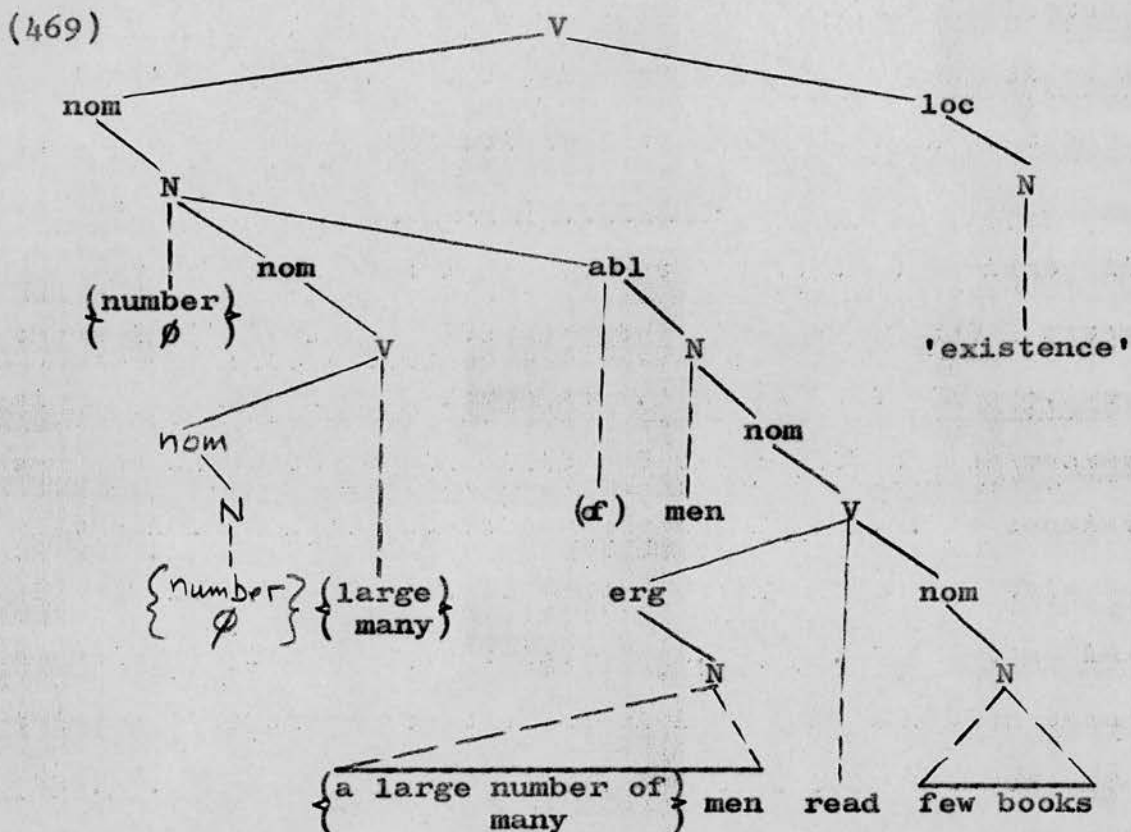
Further support comes from the fact that variants like those in (439) can be accommodated by a very natural extension of rules already formulated. As suggested above, we can associate the availability of these with the character of the internal structure of many and few, i.e. as consisting of a N with a dependent V. But formerly we regard this V as being derived by (restricted) QL. (439.a) was thus in this respect closer to the underlying representation than (436.a). I am going to suggest now that the V starts off as a dependent of the N and is in fact raised in the development of (439). However, we can still relate this distinctiveness of many and few (as compared with some, all) to the occurrence of the V.

The structure in (445) is indeed abbreviated in one aspect crucial to our present concerns: the internal structure of many is not shown. Let us accordingly expand in this respect the configuration governed by the higher nominative N, and substitute for (445) the structure represented in (469):

(469)

/(469).....





Observe now that this makes it clear that there are two mutually commanding Vs dependent (at greater or less distance) on the nominative N in the existential predication. Either is available for V-adjunction. In the derivation of (436.a), as we have seen, the read V is attached to the upper V. But suppose that the many/large V is so moved, and this predication undergoes the development we originally proposed for the read clause. The read predication in this instance will then develop as a normal relative clause. I suggest that this is exactly what happens in the development of (439.a) and (470):

(470) The number of men who read few books is large

the existence of which as a paraphrase for (439.a) is totally unaccounted for by an analysis of quantifiers as higher predicates.

This derivation allows for (439.a) and (470) in terms of the same processes as account for (436.a) (and ultimately (437.a)). Thus, even with many and few, there is no necessity to appeal to an otherwise unmotivated rule of QL.

to relate such pairs. An analysis in terms of a super-ordinate existential (together with a development involving various independently motivated transformational operations) provides what seems to me a satisfactory account of the relevant range of observations. This analysis, I suggest, is at least as plausible on syntactic grounds as the proposals made by Lakoff. But perhaps this is not the most important moral to be drawn from the preceding discussion. Both sets of underlying representations are intended to be semantic. But I would claim that the representations involving quantifiers as higher predicates provide inadequate characterizations of the difference in meaning between, say, (436.a) and (436.b). It is this which seems to me the most serious defect in Lakoff's proposals, which otherwise contain, as usual, many valuable insights. I find myself in the position of making a plea for more attention to the notional requirements. It may indeed be that (at least at the present stage in our understanding) underlying representations are relatively under-determined by conventional syntactic arguments. Notional considerations are then crucial, and equally available to public scrutiny. I think it somewhat ironic that the leading castigator of 'arbitrary syntax' should be associated with a kind of representation for sentences containing quantifiers which might be taken as a paradigmatic instance of 'arbitrary semantics'.

However that may be, the preceding discussion does at least show that the evidence provided by Lakoff is compatible with an analysis of quantifiers that can be reconciled with my partitive proposal, and that there are other phenomena tending to prefer that analysis over Lakoff's. Thus, we have removed an apparent source of difficulty for our hypothesis concerning adnominal relations and in doing

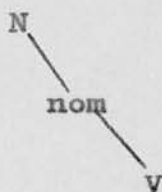
so have indeed provided some further support.

I must conclude with a few remarks on the 'definite article' -- though largely to sketch out the investigation that requires to be done, rather than to propose any firmly supported analysis. We have interpreted the 'indefinite article' (where it is not due to an output constraint) as an (unstressed) (numeral) quantifier. Thus, it always involves a N governing an ablative phrase containing another N. Consider now a sentence like that whose derivation is traced in (420)-(423). The subconfigurations underlying the president, as represented there, differ from those for a president only in lacking the supranominal N and its immediately dependent abl. But clearly the distribution of the is not to be predicted simply on this basis, as is shown by (471):

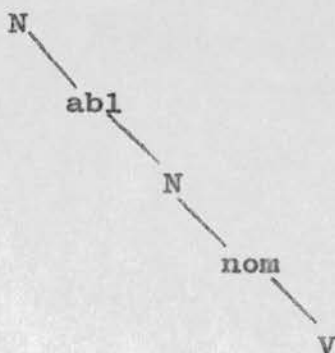
(471) One of the presidents left.

We might try to accommodate this by proposing the following. Suppose that underlying the president and a president there are respectively the representations shown in (472.a) and (472.b):

(472) a.

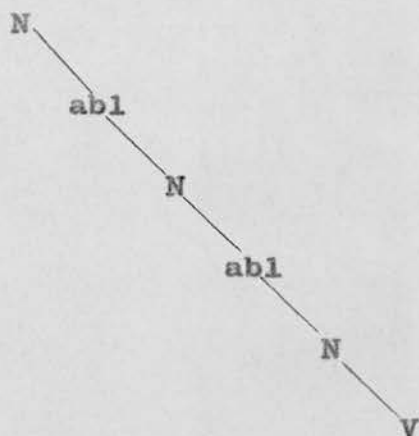


b.



Then we can suggest as underlying (471), the structure in (473):

(473)



('one of the (specified) subset of the set who...'). In this case, the presence or absence of the is determined by the number of abl's present: they are absent if an odd number of abl's is present. However, two immediate objections arise in regard to this. Observe firstly that there appear to be configurations like (473) which are realized by phrases either having the article situated elsewhere or lacking a definite article altogether, as in (474):

(474) a. Most of part of the consignment

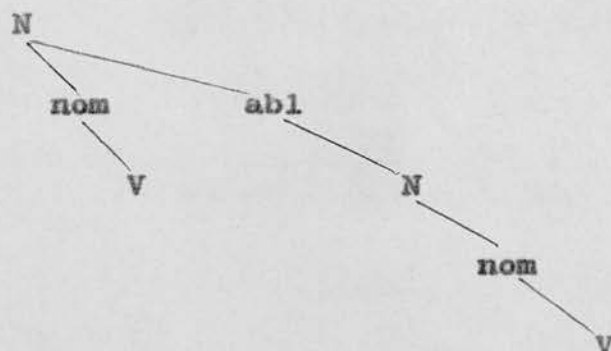
b. A small part of many consignments.

Secondly, (473) gives expression to the 'subset of set' notion involved in the use of the 'definite article'; no such expression appears in (472.a). Moreover, neither of these expresses the component indicated by my bracketed '(specified)' in the gloss provided for (473). This suggests that the occurrence of the 'definite article' cannot be described in this purely 'negative' way, i.e. as dependent on certain aspects of the configurations we have proposed for quantifiers.

'Definite articles' require, then, some such representation as appears in (475):



(475)



which includes both the class-inclusion configuration (N - abl - N) and a V dependent on the upper N which can be realized as specified, aforementioned and the like. Thus, the 'definite article' is a quantifier which, like many, involves an immediately dependent V. The attributive V with many 'narrows down' reference by relative quantification; that with the 'narrows down' by non-ostensive deixis. It differs in this latter respect from this and that, which involve ostension. There are clearly instances of the in English which do not presuppose such a notional characterization, notably much-discussed cases like the (present) King (of Denmark), the (present) Foreign Secretary. The presence of the with such uniquely-referring substantives is perhaps due to an output condition; it is absent with the (in this respect) comparable Fred. Moreover, such a characterization in itself does not resolve the many problems connected with constraints on such chains of quantifiers as are exemplified by (473). Recall, for instance, that a deictic quantifier must come below any others: post-article quantifiers derive from a non-restrictive relative.

PART IV

## 9. Conclusion

In the preceding chapters it has been argued that category symbols be eliminated as systematic elements of the grammar: all nodes have complex labels. These complex elements are hierarchized in terms of dependency, such that (the elements in) each syntagm is governed by its characteristic element. At the point at which lexical insertion occurs each complex node has a further morphologico-phonological label assigned to it. Various transformational rules delete nodes and subjoin certain nodes to others; thus, not every member of the set of semantically wellformed node-labels is given a direct lexical representation. We have been concerned primarily with the character of some of the well-formedness constraints associated with the internal specification of node-labels and the configurations into which nodes enter.

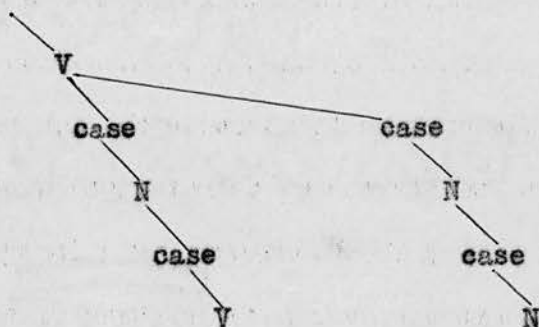
In particular, I have proposed a fundamental division of semantic elements in terms of the distinctions  $\left[ \begin{smallmatrix} + \\ - \end{smallmatrix} \text{predicative}, \begin{smallmatrix} + \\ - \end{smallmatrix} \text{substantive}, \begin{smallmatrix} + \\ - \end{smallmatrix} \text{stative} \right]$ : such that functional elements, cases, are  $\left[ \begin{smallmatrix} - \text{predicative} \\ - \text{substantive} \end{smallmatrix} \right]$  and 'terms' ('variables'), Ns, are  $\left[ \begin{smallmatrix} - \text{predicative} \\ + \text{substantive} \end{smallmatrix} \right]$

with quantifiers and inalienables being associated with configurations<sup>ion</sup> governed by an N on which depends immediately an ablative or a locative N, respectively; the  $\left[ + \text{predicative} \right]$  elements ('contentives', 'predicates') divide into  $\left[ \begin{smallmatrix} + \text{substantive} \\ + \text{stative} \end{smallmatrix} \right]$  ('nouns'),  $\left[ \begin{smallmatrix} - \text{substantive} \\ + \text{stative} \end{smallmatrix} \right]$  ('adjectives') and  $\left[ \begin{smallmatrix} - \text{substantive} \\ - \text{stative} \end{smallmatrix} \right]$

('verbs'), with the qualification that  $\begin{bmatrix} + \text{locative} \\ + \text{stative} \end{bmatrix}$  predicates

may be manifested as superficial 'adjectives' or 'verbs'. There is apparently a general constraint on semantic configurations involving nodes specified in this manner, such that a series of immediately dependent nodes must involve alternating predicates and terms separated by a single case node in each instance, as indicated schematically in (476):

(476)



(476) also indicates that a case immediately governing a N can be immediately dependent on a N (rather than a V), as instanced by the representations proposed for quantifiers in ch. 8. We explored, particularly in chs. 7 and 8, some of the reflexes of these distinctions.

Most of our efforts, however, have been directed towards the further characterization of the case elements and towards establishing the relevance of the proposed characterization to a wide range of grammatical phenomena. We have been led to formulate anew a localistic hypothesis concerning functional relations. We have recognized only four distinct functions, and these four are differentiated in terms of the two notions regarded as basic by the localist tradition, namely 'location' and 'direction'. I



have however taken the latter to be reducible to 'location' plus 'polarity', such that 'directionality' involves the conjunction of two cases agreeing in whether they are locational or not but disagreeing in polarity. The four cases are thus characterized

as	<div> <div>- predicative</div> <div>- substantive</div> <div>- locative</div> <div>- negative</div> </div>	('noun'),	<div> <div>- predicative</div> <div>- substantive</div> <div>+ locative</div> <div>- negative</div> </div>	('loc'),	
	<div> <div>- predicative</div> <div>- substantive</div> <div>- locative</div> <div>+ negative</div> </div>	('erg') and	<div> <div>- predicative</div> <div>- substantive</div> <div>+ locative</div> <div>+ negative</div> </div>	('abl').	In part

II we were concerned to establish the existence of these for certain central, hopefully not too controversial instances. Chapters 5, 6 and in part 7 and 8 embody various attempts at showing that various apparently distinct functions ('indirect object' or 'dative', 'object of result', 'temporal adverb', 'partitive', etc) can be plausibly reduced to instances of, or configurations involving instances of, these four. In chapters 7 and 8 such a localistic interpretation is extended to certain phenomena usually thought of as lying outside the area to be referred to a theory of grammatical functions, in particular phenomena involving 'aspect', the distinction between contingency and absoluteness, 'Aktionsarten' in general. Contingent predications, for instance, are interpreted as temporally restricted existential predications associated with the 'event'/'state' represented by the predicate realized as the 'main verb/adjective/predicative nominal'.

Consider finally some of the wider implications of such analyses, if they are indeed well-founded. Let us assume that they are, and that, further lexical decomposition does indeed in general involve us in associating with lexical items semantic representations like those we have associated with phrases and sentences (cf. Anderson, 1968b; Postal, 1970). Fundamental to the structure of the latter are the notions of location and direction. Spatial location involves the most obvious manifestation of these; and more abstract interpretations can plausibly be interpreted as depending, outogenetically, and in terms of the periodic 'renewal' of functional markers, on an extension from the spatial. This does at least present us with a hypothesis entailing certain testable predicates. Suppose it is true, and that other atomic elements show such a spatial/abstract hierarchy. 'Metaphorical extensions' are thus systematically determined, diachronically and synchronically. Then 'fields' of semantic elements are referential extensions, projections of spatial relationships on to abstract collections. The universality of such semantic elements as are universal, the naturalness of such semantic relations as are natural, does not in this case require the postulation of an innately determined status for such elements qua linguistic phenomena. Their universality derives from our common spatio-temporal setting together with a general cognitive capacity for 'abstract projection', whatever its source. It is comparatively easy to argue (as in Chomsky, 1965: ch. 1) for an innativist position if only linguistic forms are regarded as the input to the 'language

acquisition device', though even the alleged irregularity of 'ordinary language' is exaggerated by such accounts, as is clear from the recent work of Labov, etc. But proposals like that I am sketching out require to be disconfirmed before the innativist hypothesis, which is less amenable to direct empirical contradiction and therefore less highly valued, need be resorted to.

I am thus claiming that the (putative) existence of universals, like the semantic functions or cases I have proposed, does not entail an innate status for these elements themselves. This is also becoming clear with respect to other areas of the grammar. It seems likely that recurrent or 'natural' transformational processes or constraints on these processes may have a perceptual basis (cf. for example, the recent work of Bever and Langendoen -- e.g. Langendoen, 1970; Bever & Langendoen, 1971): something like the interplay of 'abbreviation' (in the sense used by the eighteenth century universal grammarians) versus 'perspicuity' may be appropriate here. The quest for explanations of the naturalness and universality of various phonological processes is leading to accounts based on articulatory and/or perceptual factors. The character of the universal phonetic elements themselves may be essentially derivative of physiological capabilities, rather than themselves being in some way genetically transmitted. Once again, such a possibility requires to be seriously explored before the leap into innativism is made. And it requires to be explored independently of a conception like Chomsky and Halle's (1968) so-called 'universal phonetic alphabet', which since it serves to characterize possible systematic phonetic

representations and since such representations are related to 'physical phonetics' by a set of rules of unspecified form and scope, is essentially a device for blocking confrontation with empirical (dis)confirmation. Such an alphabet is not yet a hypothesis about language.



**PART V**

BIBLIOGRAPHYAbbreviations

AJPh	American Journal of Philology
AL	Acta Linguistica (Hafniensia)
AnL	Anthropological Linguistics
ASNS	Archiv für das Studium der neueren Sprachen
BGDSL	Beiträge zur Geschichte der deutschen Sprache und Literatur
BPTJ	Biuletyn polskiego towarzystwa językoznawczego
BSE	Brno Studies in English
BSL	Bulletin de la Societe de Linguistique de Paris
CFS	Cahiers Ferdinand de Saussure
CJL	Canadian Journal of Linguistics/Revue Canadienne de Linguistique
ES	English Studies
FL	Foundations of Language
GL	General Linguistics
IC	Information and Control
IF	Indogermanische Forschungen
IJAL	International Journal of American Linguistics
IL	Indian Linguistics
JAF	Journal of American Folklore
JAOS	Journal of the American Oriental Society
JEGP	Journal of English and Germanic Philology
JL	Journal of Linguistics
JPsych	Journal de psychologie normale et pathologique

KB	Beiträge zur vergleichenden Sprachforschung auf dem Gebiete der arischen, celtischen und slavischen Sprachen
KZ	Zeitschrift für vergleichende Sprachforschung
Lg	Language
MLN	Modern Language Notes
MSLL	Georgetown University Monograph Series on Languages and Linguistics
MSprak	Moderna Språk
NTS	Norsk Tidsskrift for Sprogvidenskap
PBML	Prague Bulletin of Mathematical Linguistics
PF	Prace Filologiczne
PhP	Philologica Pragensia
PhQ	Philological Quarterly
PMLA	Publications of the Modern Language Association of America
PPhs	Proceedings of the Philological Society
PSML	Prague Studies in Mathematical Linguistics
RRLing	Revue Roumaine de Linguistique
SAP	Studia Anglica Posnaniensia
SbAWW(PH)	Sitzungsberichte der Akademie der Wissenschaften, Wien, philologisch-historischen Klasse
SbPaw	Sitzungsberichte der Preussischen Akademie der Wissenschaften
SCL	Studii si Cercetări Lingvistice
SL	Studia Linguistica
TCLC	Travaux du Cercle Linguistique de Copenhague
TCLP	Travaux du Cercle Linguistique de Prague
TLP	Travaux Linguistiques de Prague
TPhS	Transactions of the Philological Society

UJb	Ungarische Jahrbücher
VJa	Voprosy Jazykoznanija
VMAW(L)	Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen, Afd. Letterkunde
ZAA	Zeitschrift für Anglistik und Amerikanistik
ZDMG	Zeitschrift der Deutschen Morgenländischen Gesellschaft

Abbott, E.A. (1883). A Shakespearian Grammar. London:  
Macmillan.

Akerlund, A. (1911). On the History of the Definite Tenses in  
English. Cambridge.

Akmajian, A. (1970). On deriving cleft sentences from pseudo-  
cleft sentences. Linguistic Inquiry 1. 149-68.

Allan, K. (1970). Aspect in English. University of Edinburgh:  
M. Litt. Thesis.

Allen, R. L. (1966). The Verb System of Present-day American  
English. The Hague: Mouton.

Allen, W. S. (1956). Structure and system in the Abaza verbal  
complex. TPhs 127-76.

(1964). Transitivity and possession. Lg 40. 337-43.

Anderson, J. M. (1968a). Ergative and nominative in English.  
JL 4. 1-32.

(1968b). On the status of 'lexical formatives'. FL 4. 308-18.

(1969a). A note on 'rank' and 'delicacy'. JL 5. 129-35.

(1969b). Adjectives, datives and ergativisation. FL 5. 301-22.

(1970a). The case for cause: a preliminary enquiry. JL 6.  
99-104.



- (1970b). Just for the record. GL 10. 12-7.
- (1971a). Dependency and grammatical functions. FL 7. 30-7.
- (1971h). Some proposals concerning the modal verb in English.  
In Aitken, A. J., McIntosh, A. & Palsson, H. (eds.)  
Edinburgh Studies in English and Scots, 69-120. London:  
Longman.
- (1971c). The Grammar of Case: Towards a Localistic Theory.  
London & New York: Cambridge University Press.
- (1971d). Outline of a proposal for the lexicalisation of  
complex structures. SL 25. 1-8.
- (1971e). Universal quantifiers. (Unpublished).
- (forthcoming a). Remarks on the hierarchy of quasi-predications.  
R R Ling 17.
- (forthcoming b). Maximi Planudis in memoriam. In Kiefer, F  
& Ruwet, N. (eds.).
- (in preparation a). New verbs for old.
- (in preparation b). Review of N<sup>3</sup>Diaye, G. (1970).  
Structure du dialecte basque de Maya. Lingua
- Anderson, T. R. (1968). On the transparency of begin: some  
uses of semantic theory. FL 4. 394-421.
- Asher, R. E. (1968). Existential, possessive, locative and  
copulative sentences in Malayalam. In Verhaar, J. W. M. (ed.),  
88-111.
- Ashton, E. O. (1944). Swahili Grammar. London: Longman,  
Green.
- Bach, E. (1967). Have and be in English syntax. Lg 43.  
462-85. (1968). Nouns and noun phrases. In Bach, E. &

- 440
- [Harms, R. T. (eds.), 91-122.
- Bach, E. & Harms, R. T. (eds.) (1968). Universals in Linguistic Theory. New York: Holt, Rinehart & Winston.
- Bachmann, L. (ed.) (1828). Anecdota Graeca, II. Leipzig.  
(Reprinted 1965, Hildesheim: Georg Olms.)
- Bacon, F.: see Robertson, J. M. (ed.).
- Baker, H. G. (1931). Case in some earlier and later English grammars. Papers of the Michigan Academy of Science, Arts and Letters 14. 525-35.
- Bally, C. (1926). L'expression des idées de sphère personnelle et de solidarité dans les langues indo-européennes.  
Festschrift Louis Gauchat, 68-78. Aarau: Sauerlander.  
(1932), Linguistique générale et linguistique française. Paris: Leroux.
- Bazell, C. E. (1937). Notes on synchronic grammar (1): case in English. ES 19. 20-3.  
(1965) Semantics and non-semantics. PhP 8. 131-3.
- Beauzée, M. (1767). Grammaire générale ou exposition raisonnée des éléments nécessaires du langage pour servir de fondement à l'étude de toutes les langues, Paris.
- Bendix, E. H. (1966). Componential Analysis of General Vocabulary. The Hague: Mouton.
- Bennett, D. (1968). English prepositions: a stratificational approach. JL 4. 153-72.
- Benveniste, E. (1949). Le système sublogique des prépositions en latin. Recherches structurales (TCLC 5). 177-84.  
(1952). La construction passive du parfait transitif.

- BSL 48. 52-62.  
(1960). 'Être' et 'avoir' dans leurs fonctions linguistiques.  
BSL 55. 113-34  
(Reprinted as ch. 12 in Problèmes de linguistique générale (1966)  
Gallimard, Paris.)  
(1968). Mutations of linguistic categories. In Lehmann,  
W. P. & Malkiel, Y. (eds.), Directions in Historical  
Linguistics, 83-94. Austin: University of Texas Press.  
Bertschinger, M. (1941). To Want: An Essay in semantics.  
(Swiss Studies in English 13.)  
Bern: A. Francke.  
Bever, T. G. & Langendoen, D. T. (1971). A dynamic model of the  
evolution of language. Linguistic Inquiry 2. 433-63  
Bhattacharya, S. (1954). Studies in the Parengi language.  
IL 14. 45-63.  
Bierwisch, M. (1969). On certain problems of semantic  
representations. FL 5. 153-84.  
Bierwisch, M. & Heidolph, K. E. (eds.) (1970). Progress in  
Linguistics. The Hague: Mouton.  
Binnick, R. I. (1968a). On transformationally derived verbs in  
a grammar of English. (Paper read at the L.S.A. Summer  
Meeting, 1968).  
(1968b). Transitive verbs and lexical insertion. (Paper read  
before the Chicago Linguistic Society, December, 1968.)  
Blake, F. R. (1930). A semantic analysis of case. Curme  
Volume of Linguistic Studies (Language Monograph 7), 34-49.  
Blok, H. P. (1955-6). Localism and deixis in Bantu linguistics.

- Lingua 5. 382-419.
- Boas, F. (ed.) (1911). Handbook of American Indian Languages, I.  
(Bureau of American Ethnology, Bulletin 40, pt. 1.)  
Washington, D.C.: Smithsonian Institute.
- (1911a). Introduction to Boas (ed.) (1911), 1-83.  
(Reprinted as pp. 1-79 in Holder (ed.).)
- (1911b). Chinook. In Boas (ed.) (1911), 559-677.
- (1911c). Tsimshian. In Boas (ed.) (1911), 283-422.
- (ed.) (1922). Handbook of American Indian Languages, II.  
(Bureau of American Ethnology, Bulletin 40, pt. 2.) Washington,  
D.C.: Smithsonian Institute.
- Boas, F. & Swanton, J. R. (1911). Siouan (Dakota). In Boas (ed.)  
(1911), 875-965.
- Bolinger, D. L. (1952). Linear modification. PMLA 67. 1117-44.
- (1971). The nominal in the progressive. Linguistic Inquiry  
2. 246-50.
- Bosworth, J. & Toller, T. N. (1898). An Anglo-Saxon Dictionary.  
London: Oxford University Press.
- Bowers, F. (1968). English complex sentence formation. JL 4.  
83-8.
- Boyd, J. & Thorne, J. P. (1969). The semantics of modal verbs.  
JL 5. 57-74.
- Braaten, B. (1967). Notes on continuous tenses in English.  
NTS 21. 167-80.
- Brøndal, V. (1948). Les parties du discours. Copenhagen:  
Ejnar Munksgaard.
- (1950). Théorie des prépositions. Copenhagen: Ejnar



Munksgaard.

Brorström, S. (1965). Studies on the Use of the Preposition Of In Fifteenth Century Correspondence.

Brugmann, K. (1911). Vergleichende Laut-, Stammbildungs- und Flexionslehre der Indogermanischen Sprachen, II (=vol. 2, pt 2 of Brugmann, K. & Delbrück, B., Grundriss der vergleichenden Grammatik der Indogermanischen Sprachen). Strassburg: Trübner.

Brunner, K. (1962). Die Englische Sprache. Tübingen: Niemeyer.

Brusendorff, A. (1930). The relative aspect of the verb in English. In A Grammatical Miscellany offered to Otto Jespersen, 225-47. Copenhagen and London: Levin & Munksgaard and Allen & Unwin.

Bull, W. E. (1963). Time, Tense and the Verb. (University of California Publications in Linguistics 19.) Berkeley & Los Angeles: University of California Press.

Buyssens, E. (1950). La conception fonctionnelle des faits linguistiques. JPsych (special number: Grammaire et psychologie). 35-51

Calder, G. (1923). A Gaelic Grammar. Glasgow: MacLaren.

Caldwell, R. (1875). A Comparative Grammar of the Dravidian or South Indian Family of Languages. London: Trübner.

Campbell, R. N. & Wales, R. J. (1969). Comparative structures in English. JL 5. 215-51

Carden, G. (1970). On post-determiner quantifiers. Linguistic Inquiry 1. 415-27.

- Chafe, W. L. (1967). Language as symbolization. Lg 43. 57-91.
- (1968a). Idiomaticity as an anomaly in the Chomskyan paradigm FL 4. 109-27.
- (1968b). Review of Lamb (1966). Lg 44. 593-603.
- (1970). Meaning and the Structure of Language. Chicago: Chicago University Press.
- Chanidze, A. (1963). Le sujet grammatical de quelques verbes intransitifs en géorgien. BSL 58. 1-27.
- Chomsky, N. (1965). Aspects of the Theory of Syntax. Cambridge, Mass.: M.I.T.
- (1966). Cartesian Linguistics. New York: Harper & Row.
- (1968). Language and Mind. New York: Harcourt, Brace & World.
- (1970). Remarks on nominalisations. In Jacobs, R. A. & Rosenbaum, P. S. (eds.).
- (forthcoming). Deep structure, surface structure and semantic interpretation. In Jakobovits, L. A. & Steinberg, P. P. (eds.).
- Chomsky, N. & Halle, M. (1968). The Sound Pattern of English. New York: Harper & Row.
- Christie, J. J. (1969). Locative, possessive and existential in Swahili. (To appear in FL).
- Čikobava, A. S. (1969). Les problèmes de la construction ergative dans les langues ibéro-caucasiennes. Languages 15 108-26
- Cohen, M. (1924). Le système verbal sémitique et l'expression du temps. Paris: Leroux.

- Collinder, B. (1949). The Lappish Dialect of Jukkasjärvi.  
(Skriften utgivna av K. Humanistiska Vetenskaps-Samfundet i  
Uppsala 37,3). Uppsala and Leipzig, Almqvist & Wiksell and  
Harrassowitz.
- (1957). Survey of the Uralic Languages. Stockholm:  
Almqvist & Wiksell.
- Collins, B. (1962). Tonga Grammar. London: Longmans.
- Collinson, W. E. (1937). Indication. (Language Monograph 17.)  
Baltimore, Md.: Linguistic Society of America.
- Condillac, E. B. de (1775). Cours d'études pour l'instruction  
du Prince de Parme, II: Grammaire. In LeRoy, G. (ed.),  
425-513.
- Corder, S. P. (1968). Double-object verbs in English. SAP 1.  
15-28.
- Crout, L. (1859). A Grammar of the Zulu Language. London:  
Trübner.
- Crosby, K. H. (1944). An Introduction to the Study of Mende.  
Cambridge: Heffer.
- Cowell, R. (1951). The Structure of Gilbertese. Gilbert  
Islands.
- Csank, J. (1853). A Complete Practical Grammar of the  
Hungarian Language. London: Williams & Norgate.
- Curme, G. O. (1913a). Development of the progressiv [sic--  
JMA] form in Germanic. PMLA 28. 159-87.
- (1913b). The proper subject of a passiv [sic--JMA] verb.  
MLN 28. 97-101.
- Curry, H. B. (1961). Some logical aspects of grammatical

- structure. In Jakobson, R. (ed.), 56-69.
- Dal, I. (1952). Zur Entstehung des Englischen participium praesentis auf-ing. NTS 16. 5-116.
- Danes, F. (1964). A three-level approach to syntax. TLP 1. 225-40.
- (1968). The semantic structure of the sentence. Lingua 21. 55-69.
- Darrigol, J. P. (1829). Dissertation critique et apologetique sur la langue basque. Bayonne: Duhart-Fauvet.
- Davidson, W., Elford, L. W. & Hoijer, H. (1963). Athapaskan classificatory verbs. In Hoijer et al., Studies in the Athapaskan Languages, 30-41. (University of California Publications in Linguistics, 29). Berkeley & Los Angeles: University of California Press.
- Dietze, H. (1895). Das umschreibende Do in der neuenglischen Prosa. Jena: Frommansche Hof-Buchdruckerei.
- Di, S. C. (1968). Coordination: Its Implications for the Theory of General Linguistics. Amsterdam: North-Holland.
- Doke, C. M. (1954). The Southern Bantu Languages. London: Oxford University Press.
- Donzé, R. (1967). La Grammaire générale et raisonnée de Port-Royal. Berne: A. Francke.
- Dougherty, R. C. (1970). Recent studies on language universals. FL 6. 505-61.
- Droeschner, W. O. (1969). German verb types. Lingua 24. 19-32.
- Einenkel, E. (1916). Geschichte der englischen Sprache, II:



- Historische Syntax. Strassburg: Trübner.
- Ek, J. A. van (1967). A grammatical description of the accusative with infinitive and related structures in English. ES 48. 511-27, suppl. i-xvii.
- Ellegård, A. (1953). The Auxiliary Do. (Gothenburg Studies in English, II) Stockholm: Almqvist & Wiksell.
- Ellot, C. N. E. (1890). A Finnish Grammar. London: Oxford.
- Entwhistle, W. J. (1953). Aspects of Language. London: Faber & Faber.
- Erades, P. A. (1950). Points of Modern English syntax. ES 31. 153-7.
- Erichson, M. (1944). Désinences casuelles et personnelles en eskimo. AL 4. 67-88.
- Ernout, A. & Thomas, F. (1951). Syntaxe Latin. Paris: Klincksieck.
- Fillmore, C. J. (1965). Indirect Object Constructions in English and the Ordering of Transformations. The Hague: Mouton.
- (1966a). A proposal concerning English prepositions. MSLL 19. 19-33.
- (1966b). Deictic categories in the semantics of 'come'. FL 2. 219-27.
- (1968a). The case for case. In Bach, E. & Harms, R. T. (eds.), 1-88.
- (1968b). Lexical entries for verbs. FL 4. 373-93.
- (1968c). Types of lexical information. Ohio State University Computer and Information Science Research Center: Papers in Linguistics 2. 65-103.

- (1969). Review of Bendix, (1966). GL 9. 41-65.
- Finck, F. N. (1907). Der angeblich passivische Charakter des transitiven Verbs. KZ 41. 209-32.
- (1910). Die Haupttypen des Sprachbaus. Leipzig: B. G. Teubner.
- Firbas, J. (1964). On defining the theme in Functional Sentence Analysis. TLP 1. 267-80.
- (1966). Non-thematic subjects in Contemporary English. TLP 2. 239-56.
- Fodor, J. A. (1970). Three reasons for not deriving 'kill' from 'cause to die'. Linguistic Inquiry 1. 429-38.
- Fodor, J. A. & Katz, J. J. (eds.) (1964). The Structure of Language. Englewood Cliffs, N. J.: Prentice-Hall.
- Frachtenberg, L. J. (1922). Coos. In Boas (ed.) (1922), 297-429.
- Frei, H. (1939). 'Sylvie est jolie des yeux'. In Mélanges de linguistique offerts à Charles Bally, 83-92. Geneva: Georg.
- Fries, C. C. (1952). The Structure of English. New York: Harcourt, Brace & World.
- Gaaf, W. van der (1904). The Transition from the Impersonal to the Personal Construction in Middle English. (Anglistische Forschungen 14). Heidelberg: Carl Winter.
- (1929). The conversion of the indirect personal object into the subject of a passive construction. ES 11. 1-11, 58-67.
- Gabain A. von (1945). Ösбекische Grammatik. Leipzig & Vienna: Harrassowitz.
- Gabelentz, G. von der (1891). Die Sprachwissenschaft. Leipzig: Weigel.

- Gaifman, H. (1965). Dependency-systems and phrase-structure systems. IC 8. 304-37.
- Gallagher, M. (1970). Adverbs of time and tense. In Papers from the Sixth Regional Meeting, Chicago Linguistic Society, 220-5. Chicago, Ill.
- Gardiner, A. H. (1927). Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs. London: Oxford University Press.
- Garnett, R. (1846-7). On the formation of words by the further modification of inflected cases. PPhS 3. 9-15, 19-29.  
(Reprinted as pp. 260-31 in Garnett (1859).)
- (1848-50). On the nature and analysis of the verb. PPhS 3. 159-64, 183-6, 213-17; 4. 15-23, 95-100, 155-62, 173-82, 233-7. (Reprinted as pp. 289-342 in Garnett (1859).)
- (1859). Philological Essays. London: Williams & Norgate.
- Gebhardt, A. (1907). Grammatik der Nürnberger <sup>un</sup>Mundart. Leipzig: Breitkopf & Härtel.
- Gecaga, B. Mareka & Kirkaldy-Willis, W. H. (1953). A Short Kikuyu Grammar. London: Macmillan.
- Gering, H. (1874). Über den syntaktischen Gebrauch der Participia in Gotischen. 2DPh 5. 294-324, 393-344.
- Geze, L. (1875). Éléments de grammaire basque (dialecte souletin). Bayonne.
- Gildersleeve, B. L. & Lodge, G. (1895). Latin Grammar. London: Macmillan.
- Ginneken, J. van (1939). Avoir et être (du point de vue de la linguistique générale). Mélanges de linguistique offerts à Charles Bally, 83-92. Geneva: Georg.

- Godel, R. (1945). Grammaire Turque. Geneva: Georg.
- (1950). Verbes d'état et verbes d'événement. CFS 9. 33-50.
- Gonda, J. (1957). The character of the Sanskrit accusative.  
In Catalan, D. (ed.) Miscelanea Homenaje a André Martinet,  
1, 47-65. Canarias: Universidad de La Laguna.
- Gonda, J. (1951). Remarks on the Sanskrit Passive. Leiden:  
Brill.
- (1956). The Character of the Indo-European Moods. Wiesbaden:  
Hartassowitz.
- Goyvaerts, D. L. (1968). Towards a theory of the expanded form  
in English. La linguistique 2. 111-24.
- Grady, M. (1967). On the essential nominalizing function of  
English -ing. Linguistics 34. 5-11.
- Grasserie, R. de la (1890). Des relations grammaticales  
considérées dans leur concept et dans leur expression, ou De  
la catégorie des cas. Paris: Maisonneuve.
- (1896). Essai de syntaxe générale. Louvain: J. B. Istas.
- (1901). De l'antériorité du génitif, & Des mots auxiliaires  
supplétifs et expletifs. Paris: Maisonneuve.
- (1914a). Du verbe comme générateur des autres parties du  
discours. Paris: Maisonneuve.
- (1914b). Du caractère concret de plusieurs familles  
linguistiques américaines. Paris: Maisonneuve.
- Gray, L. H. (1939). Foundations of Language. New York:  
Macmillan.
- Green, A. (1914). The analytic agent in Germanic. JEGP 13.  
514-52.



- Greenberg, J. (1963). Some universals of grammar with particular reference to the order of meaningful elements. In Greenberg, J. (ed.) Universals of Language, ch. 5. Cambridge, Mass: M.I.T.
- Greimas, A.-J. (1966). Sémantique structurale. Paris: Larousse.
- Grierson, G. A. (ed.) (1903). Linguistic Survey of India III: Tibeto-Burman Family II. Calcutta: Government Printing Office.
- (ed.) (1904a). Linguistic Survey of India II: Mon-Khmer and Siamese-Chinese Families (including Khassi and Tai). Calcutta: Government Printing Office.
- (ed.) (1904b). Linguistic Survey of India III: Tibeto-Burman Family III. Calcutta: Government Printing Office.
- (ed.) (1909). Linguistic Survey of India III: Tibeto-Burman Family I. Calcutta: Government Printing Office.
- Grønbech, K. & Krueger, J. R. (1955). An Introduction to Classical (Literary) Mongolian. Wiesbaden: Harrassowitz.
- Groot, A. W. de (1956). Classification of cases and uses of cases. For Roman Jakobson, 187-94. The Hague: Mouton.
- Gruber, J. S. (1967). Look and see. Lg 43. 937-47.
- Guillaume, G. (1964). Langage et science du langage. Paris and Quebec: Nizet and Presses de l'Université Laval.
- Hadley, J. (1867). On passive formations. In Essays Philological and Critical (1873), 199-214. London: Macmillan.
- (1873). On the formation of Indo-European futures. In Essays Philological and Critical, 184-98. London: Macmillan.

- Halle, M. (1962). Phonology in generative grammar. Word 18. 54-72. (Reprinted in Fodor, J. A. & Katz, J. J. (eds.), 324-33).
- Halliday, M. A. K. (1961). Categories of the theory of grammar. Word 17. 241-92.
- (1964). Syntax and the consumer. MSLL 17. 11-24
- (1966). Some notes on 'deep' grammar. JL 2. 57-67.
- (1967). Notes on transitivity and theme, 1 & 2. JL 3. 37-81 199-244.
- (1968). Notes on transitivity and theme, 3. JL 4. 179-215.
- Hammerich, L. L. (1951). Kleinschmidt centennial 1: The cases of Eskimo. IJAL 17. 18-22.
- (1956). Contribution to the discussion 'What inferences can be drawn from the evidence of morphology and word-formation about the development of Proto-Indo-European?' Proceedings of the Seventh International Congress of Linguistics. 175-6. London.
- Hanoteau, A. (1860). Essai de grammaire de la langue tamachek. Paris.
- Hansen, A. (1949). On the so-called indirect object in Danish. Recherches structurales (TCLC 5.) 198-202
- Harris, J. (1751). Hermes. London: T. Bolas. (Reprinted as vol. 55 in English Linguistics 1500-1800. Menston, England: The Scolar Press, 1968).
- Hartmann, H. (1954). Das Passiv: Eine Studie zur Geistesgeschichte der Kelten, Italiker und Arier. Heidelberg: Winter.

- Hartung, J.-A. (1831). Ueber die Casus, ihre Bildung und Bedeutung in der griechischen und lateinischen Sprache. Erlangen.
- Hasegawa, K. (1968). The passive construction in English. Lg 44. 230-43.
- Hatcher, A. G. (1943). 'Mr. Howard amuses easy.' MLN 58. 8-17.
- (1956). Theme and Underlying Question: Two Studies in Spanish Word Order. (Supplement to Word 12: Monograph no. 3.) New York: The Linguistic Circle of New York.
- Havers, W. (1911). Untersuchungen zur Kasussyntax der indogermanischen Sprachen. (Untersuchungen zur indogermanischen Sprach- und Kulturwissenschaft 3.) Strassburg: Trübner.
- Hays, D. (1964). Dependency theory: a formalism and some observations. Lg 40. 511-25.
- Henry, D. & K. (1969). Koyukon locationals. AnL 11. 136-42.
- Heringer, J. T. (1967). Review of Gaifman (1965). Ohio State University Research Foundation: Working Papers in Linguistics 1. 128-36.
- Hill, A. A. (1958). Introduction to Linguistic Structures: From Sound to Sentence in English. New York: Harcourt, Brace & World.
- Hill, L. A. (1968). Prepositions and Adverbial Particles. London: Oxford University Press.
- Hirtle, W. H. (1967). The Simple and Progressive Forms: An Analytical Approach. (Cahiers du psychomécanique du langage, No. 8.) Quebec: Les Presses de l'Université Laval.
- (1970). -ED adjectives like 'verandahed' and 'blue-eyed'.

JL 6. 19-36.

Hjelmslev, L. (1928). Principes de grammaire générale.

(Det Kgl. Danske Videnskabernes Selskab, Historisk-filologiske Meddelelser 16, 1.)

(1935-7). La catégorie des cas. Acta Jutlandica 7, 1

(i-xii, 1-184); 9, 2 (i-vii, 1-78).

(1954). La stratification du langage. Word 10. 163-88.

(Reprinted as pp. 36-68 in Hjelmslev (1959).)

(1959). Essais linguistiques. Copenhagen: Nordisk Sprog- og Kulturforlag.

(1961). Prolazomena to a Theory of Language. 2nd edn.

Madison, Wisconsin: University of Wisconsin Press. (Translated

by F. J. Whitfield from Omkring sprogteoriens grundlæggelse.

Copenhagen: Ejnar Munksgaard, 1943).

Hockett, C. F. (1966). Language, mathematics and linguistics.

In Sebeok, T. (ed.), 155-304.

Hoff, B. J. (1968). The Carib Language. The Hague: Mouton.

Hoffman, G. (1963). A Grammar of the Margi Language. London:

Oxford University Press.

Hofmann, T. R. (1969). Underlying vs. superficial grammatical

relations. CJL 15. 11-26

Holger, H. (1945). Classificatory verb stems in the Apachean

languages. IJAL 11. 13-23.

(1959). Semantic patterns of the Navaho language. In Gipper,

H. (ed.), Sprache - Schlüssel zur Welt: Festschrift für Leo

Weisgerber, 369-73. Düsseldorf: Pädagogischer Verlag Schwann.

(1964). Cultural implications of some Navaho linguistic

categories. In Hymes, D. H. (ed.), 142-9.



- Holder, P. (ed.) (1966). American Indian Languages. Lincoln, Nebraska: University of Nebraska Press.
- Holzweissig, F. (1877). Wahrheit und Irrthum der localistischen Casustheorie. Leipzig.
- Hornby, A. S. (1954). A Guide to Patterns and Usage in English. London: Oxford University Press.
- Householder, F. W. (1966). Review of Akhmanova et al. (1963), Exact Methods in Linguistic Research, University of California Press, Berkeley & Los Angeles. JL 2. 237-42.
- (1971). Linguistic Speculations. London: Cambridge University Press.
- Huddleston, R. D. (1969). Some observations on tense and deixis in English. Lg. 45. 777-806.
- (1970). Some remarks on case-grammar. Linguistic Inquiry 1, 201-11.
- Hudson, R. A. (1967). Constituency in a systemic description of the English clause. Lingua 18. 225-50.
- (1969). On clauses containing conjoined and plural noun phrases in English. (To appear in Lingua).
- Humboldt, W. von (1838). Über die Kawi Sprache, II. Berlin.
- Hymes, D. H. (ed.) (1964). Language in Culture and Society: A Reader in Linguistics and Anthropology. New York: Harper & Row.
- Jacobs, R. A. & Rosenbaum, P. S. (1968). English Transformational Grammar. Waltham, Mass: Blaisdell.
- (eds.) (1969). Readings in English Transformational Grammar. Waltham, Mass: Blaisdell.
- Jakobovits, L. A. R. Steinberg, P.P. (eds.) (forthcoming). Semantics: An Interdisciplinary Reader. London: Cambridge

Steinberg & Jakobovits

University Press.

- Jakobson, R. (1936). Beitrag zur allgemeinen Kasuslehre: Gesamtbedeutungen der russischen Kasus. TCLP 6. 240-83.
- (1958). Morphological inquiry into Slavic declension (structure of Russian, case forms). In American Contributions to the Fourth International Congress of Slavists, Moscow, 1958, 1-30. The Hague: Mouton.
- (ed.) (1961). Structure of Language and its Mathematical Aspects. (Proceedings of Symposia in Applied Mathematics, 12). Providence: American Mathematical Society.
- Jespersen, O. (1894). Progress in Language, with special reference to English. London: Swan Sonnenschein.
- (1913). A Modern English Grammar, II. London and Copenhagen: Allen & Unwin and Munksgaard.
- (1924). The Philosophy of Grammar. London: Allen & Unwin.
- (1928). A Modern English Grammar, III. London and Copenhagen: Allen & Unwin and Munksgaard.
- (1931). A Modern English Grammar, IV. London and Copenhagen: Allen & Unwin and Munksgaard.
- (1937). Analytic Syntax. Copenhagen: Ejnar Munksgaard.
- (1940). A Modern English Grammar, V. London and Copenhagen: Allen & Unwin and Munksgaard.
- (1949). A Modern English Grammar, VII. London and Copenhagen: Allen & Unwin and Munksgaard.
- Jochelson, W. (1927). The instrumental and the comitative in the Aleut language. Lg. 2. 9-11.
- Jones, M. (1970). Preliminary outline of the finite verbal group in Welsh. Studia Celtica 5. 94-147.

- Kahn, C. H. (1966). The Greek verb 'to be' and the concept of being. FL 2. 245-65.
- Kandiah, T. (1968). Transformational grammar and the layering of structure in Tamil. JL 4. 217-45.
- Katz, J. J. (1966). The Philosophy of Language. New York: Harper & Row.
- (1967). Recent issues in semantic theory. FL 3. 124-94.
- (1970). Interpretative semantics vs. generative semantics. FL 6. 220-59.
- Katz, J. J. & Postal, P. M. (1964). An Integrated Theory of Linguistic Descriptions. Cambridge, Mass.: M.I.T. Press.
- Key, T. H. (1844). On the articles, etc. In 'The Alphabet'... and Other Philological Papers, 116-19. London: Charles Knight.
- (1846-7). On the origin of the demonstrative pronouns, the definite article, the pronouns of the third person, the relative, and the interrogative. PPhS 3. 57-70.
- (1850-2). On the nature of the verb, particularly on the formation of the middle or passive voice. PPhS 5. 51-70.
- (1874). Language: Its Origin and Development. London: Bell.
- Kiefer, F. & Ruwet, N. (eds.) (forthcoming). Generative Grammar in Europe. (Foundations of Language Supplementary Series.) Dordrecht: Reidel.
- Kiparsky, C. & Kiparsky, P. (1970). Fact. In Bierwisch, M. & Heidolph, K. E. (eds.), 133-73.
- Kiparsky, P. (1968). Linguistic universals and linguistic change.

- In Bach, E. & Harms, R. T. (eds.), 171-202.
- Kiparsky, P. & Staal, J. F. (1969). Syntactic and semantic relations in Pāṇini. FL 5. 83-117.
- Kirchner, G. (1937). The verb with direct and indirect object re-examined, III. ES 19. 97-112.
- (1940). (To be) due as a (passive) verb-equivalent. ES 22. 27-9
- (1952). Die Zehn Hauptverben des Englischen. Halle: Niemeyer.
- (1959). Zur transitiven und intransitiven Verwendung des englischen Verbums. ZAA 7. 342-99.
- (1969). Detached observations on prepositional use in Modern, especially American English. BSE 8. 105-10.
- Kirkwood, H. W. (1969). Aspects of word order and its communicative function in English and German. JL 5. 85-107.
- Klima, E. S. (1964). Negation in English. In Fodor, J. A. & Katz, J. J. (eds.) 246-323.
- Kneen, J. J. (1931). A Grammar of the Manx Language. London: Oxford University Press.
- Koch, W. A. (1965). A semantic type of discourse analysis. Linguistics 12. 5-30.
- Koelle, S. W. (1854). Outlines of a Grammar of the Vei Language. London.
- Kohler, K. J. (1966). Towards a phonological theory. Lingua 16. 337-51.
- Komlinger, S. (ed.) (1957). Studies in English Language and Literature presented to Professor Dr. Karl Brunner. Vienna:



Braumüller.

Kosehmieder, E. (1935). Zu den Grundfragen der Aspekttheorie.  
IF 53. 280-300.

Kruisinga, E. (1931). English Accidence and Syntax, I.  
Groningen: Noordhoff.

Kuipers, A. H. (1962). The Circassian nominal paradigm.  
Lingua II. 231-48.

Kukenheim, L. (1932). Contributions à l'histoire de la grammaire  
italienne, espagnole et française à l'époque de la Renaissance.  
Amsterdam: North Holland.

Kuroda, S.-Y. (1965). Causative forms in Japanese. FL 1.  
30-50.

(1968). Review of Fillmore (1965). Lg 44. 374-8.

Kuryłowicz, J. (1931). Les temps composés du roman. PF 15.  
448-53.

~~Kurylewicz, J.~~ (1949). Le problème du classement des cas.  
BPTJ 9. 20-43.

(1964). The Inflexional Categories of Indo-European.  
Heidelberg: Carl Winter.

Lacroix, P. F. (1963). Observations sur les formes verbales  
d'"habitude" dans les parlers peuls de l'adama. Actes du  
seconde colloque internationale de linguistique négro-  
africaine, 39-51. Dakar.

Lafitte, P. (1962). Grammaire basque. Bayonne: Amis du musée  
basque & Ikas.

Lafon, R. (1960). L'expression de l'auteur de l'action du verbe  
basque. BSL 55. 186-221.

(1963). Notes explicatives à Chanidze (1963). BSL 58.  
27-40.

Lakoff, G. (1965). On the Nature of Syntactic Irregularity.  
(Report NSF-16, Mathematical Linguistics and Automatic  
Translation, The Computation Laboratory of Harvard University.)  
(1968). Instrumental adverbs and the concept of deep  
structure. FL 4. 4-29.

~~Lakoff, G.~~ (1970a). Pronominalization, negation and the analysis  
of adverbs. In Jacobs, R. A. & Rosenbaum, P.S. (eds.), 145-  
65.

~~Lakoff, G.~~ (1970b). Repartee: or a reply to 'negation,  
conjunction, and quantifiers. FL 6. 389-422.

~~Lakoff, G.~~ (forthcoming). On generative semantics. In  
Jakobovits, L. A. & Steinberg, P. P. (eds.)

Lakoff, G. & Peters S. (1969). Phrasal conjunction and  
symmetric predicates. In Reibel, D. & Schane, S. A. (eds.),  
113-42.

Lakoff, R. (1970). Tense and its relations to participants.  
Lg 46. 838-49.

Lamb, S. M. (1964a). On alternation, transformation, realization  
and stratification. MSLL 17. 105-22.

(1964b). The sememic approach to structural semantics. In  
Romney, A. K. & D'Andrade, R. G. (eds.), Transcultural Studies  
in Cognition (=American Anthropologist 66, 3, 2), 57-78.

(1965). Kinship terminology and linguistic structure. In  
Hammel, E. A. (ed.), Formal Semantic Analysis (=American  
Anthropologist 67, 5, 2), 37-64.

- (1966). Outline of Stratificational Grammar. Washington, D.C.: Georgetown University Press.
- Landar, H.-C. (1959). Four Navaho summer tales, III. JAF 72. 298-309.
- Langacker, R. W. (1967). Language and its Structure. New York: Harcourt, Brace & World.
- (1968). Observations on French possessives. Lg 44. 51-75.
- Laroche, R. (1964). 'Agent' et 'object' chez Panini. JAOS 84. 44-54.
- Lass, R. (1970). Two-parameter matrices in phonology: or why glottal stops are real stops and [h] is an obstruent. (Unpublished).
- Lass, R. (1971). Boundaries as obstruents: Old English voicing assimilation and universal strength hierarchies. JL 7. 15-30.
- Latham, R. G. (1878). Outlines of General or Developmental Philology: Inflexion. London: Longmans.
- Lee, P. G. (1966). The English preposition with. Ohio State University Research Foundation: Working Papers in Linguistics 1. 30-79.
- Leech, G. N. (1968). Review of Bendix (1966). JL 4. 298-9.
- (1969). Towards a Semantic Description of English. London: Longmans.
- Lees, R. B. (1960). The Grammar of English Nominalizations, 2nd edn. (Publications of the Indiana University Research Center in Anthropology, Folklore and Linguistics, no. 12.) The Hague: Mouton.
- Lehiste, I. (1969). 'Being' and 'having' in Estonian. FL 5.

324-41.

Lehmann, W. P. (1958). On earlier stages of the Indo-European nominal inflexion. Lg 34. 179-202.

LeRoy, G. (ed.) (1947). Oeuvres philosophiques de Condillac, I. Paris: Presses Universitaires de France.

Lévy-Bruhl, L. (1916). L'expression de la possession dans les langues melanesiennes. BSL 19. 96-104.

Lewy, E. (1928). Possessivisch und passivisch. UJb 8. 274-89.

Lindkvist, K.-G. (1905). Studies on the Local Sense of the Prepositions in, at, on and to in Modern English. (Lund Studies in English, XX.) Lund and Copenhagen: C. W. K. Gleerup and Ejnar Munksgaard.

Livet, C.-L. (1859). La grammaire française et les grammairiens au XVII<sup>e</sup> siècle. Paris: Didier and Durand.

Lohman, J. (1937). Ist das idg. Perfektum nominalen Ursprungs? I. Zur Semasiologie des Perfektum-Ausdrucks. KZ 64. 42-61.

Lombard, A. (1929). Les membres de la proposition française: essai d'un classement nouveau. MSpråk 23. 202-53.

Longacre, R. E. (1964). Grammar Discovery Procedures. The Hague: Mouton.

Lunt, H. G. (ed.) (1964). Proceedings of the Ninth International Congress of Linguists. The Hague: Mouton.

Lyons, J. (1963). Structural Semantics. (Publications of the Philological Society, 20). Oxford: Blackwell.

(1966). Towards a 'notional' theory of the 'parts of speech'. JL 2. 209-36.



- (1967). A note on possessive, existential and locative sentences. FL 3. 390-6.
- (1968a). Introduction to Theoretical Linguistics. London: Cambridge University Press.
- (1968b). Existence, location, possession and transitivity. In van Rootselaar & Staal (eds.), Logic, Methodology and Philosophy of Sciences, III, 495-504. Amsterdam: North Holland.
- Maas, U. (1971). Dependenztheorie. (Unpublished.)
- McCawley, J. D. (1968a). Concerning the base component of a transformational grammar. FL 4. 243-69.
- (1968b). The role of semantics in a grammar. In Bach, E. & Harms, R. T. (eds.), 124-69.
- (1968c). Lexical insertion in a Transformational grammar without deep structure. Papers from the Fourth Regional Meeting, Chicago Linguistic Society, 71-80. Chicago.
- (1970a). English as a VSO language. Lg 46. 286-99.
- (1970b). Where do noun phrases come from? In Jacobs, R. A. & Rosenbaum, P. S., (eds.), 166-83.
- Macdonnell, A. A. (1916). A Vedic Grammar for Students. London: Oxford University Press.
- McIntosh, A. (1968). The English comparative and some related problems. (Unpublished).
- Madvig, J. N. (1875). Kleine philologische Schriften. Leipzig: B. G. Teubner. (Reprinted 1966, Hildesheim: Georg Olms.)
- Maejima, G. (1958). Some notes on English medio-reflexive verbs. Anglica 3. 101-26.

- Manessy, G. (1964). La relation génitive dans quelques langues mandés. In Lunt, H. G. (ed.), 467-75.
- Marache, M. (1967). Flexion casuelle et fonction grammaticale, I: Les fonctions grammaticales pures. JPsych 64. 279-96.
- Martinet, A. (1958). L'ergatif et les structures de base de l'énoncé. JPsych 55. 377-92.
- (1962a). A Functional View of Language. London: Oxford University Press.
- (1962b). Le sujet comme fonction linguistique et l'analyse syntaxique du basque. BSL 57. 73-82.
- Maspero, H. (1947-8). Notes sur la morphologie du tibeto-birman et du munda. BSL 44. 155-85.
- Mathesius, V. (1929). Zur Satzperspektive im modernen Englisch. ASNS 155. 202-10.
- (1964). On linguistic characterology with illustrations from Modern English. In Vachek, J. (ed.), 59-67. (Reprinted from Actes du premier congrès international de linguistes (1928), 56-63.)
- Matthews, P. H. (1965). Problems of selection in transformational grammar. JL 1. 35-47.
- (1969). Review of Dik (1968). Lingua 23. 349-71.
- Matthews, W. K. (1953). The ergative construction in modern Indo-Aryan. Lingua 3. 391-406.
- Meillet, A. (1921). Sur la disparition des formes simples du présent. Linguistique historique et linguistique générale, 149-58. Paris.
- (1924). Le développement du verbe avoir. Antidoron:

- Festschrift J. Wackernagel, 9-13. Göttingen: Vandenhoeck & Ruprecht.
- Meillet, A. & Vendryes, J. (1924). Grammaire comparée des langues classiques. Paris: Champion.
- Mey, J. (1970). Possessive and transitive in Eskimo. JL 6. 47-56.
- Mihailović, L. (1967). Passive and pseudopassive verbal groups in English. ES 48. 316-26.
- Miller, J. E. (1970). Tense and Aspect in Russian. University of Edinburgh: Ph.D Thesis.
- Miller, R. L. (1968). The Linguistic Relativity Principle and Humboldtian Ethnolinguistics. The Hague: Mouton.
- Moreux, B. (1968). Le rôle des cas dans le tours prépositionnels en attique et en latin classique. CJL 14. 31-9.
- ✓ Morris, H. (1890). Simplified Grammar of The Telugu Language. London: Kegan Paul.
- Mossé, F. (1938). Histoire de la forme périphrastique 'être + participe présent' en germanique I & II. Paris: Klincksieck.
- (1957). Réflexions sur la genèse de la 'forme progressive'. In Kramlinger, S. (ed.), 155-74.
- Müller, F. (1876). Einleitung in die Sprachwissenschaft. Wien: Holder.
- Müller, F. (1882). Grundriss der Sprachwissenschaft II: Die Sprachen der Schlichthaarigen Rassen. Vienna: Hölder.
- Murray, J. A. H. (ed.) (1888-). A New English Dictionary on Historical Principles. London: Oxford University Press.
- Mustanoja, T. (1960). A Middle English Syntax, I. (Mémoires de

(forthcoming). Towards a generative semantic account of tense and aspect in Russian. JL.

la Société Neophilologique de Helsinki 23).

Naert, P. (1956). Le verbe basque est-il passif? SL 10. 45-9.

Nickel, G. (1960). Die Expanded Form in Altenglischen.

Neumünster: Wachholtz.

Onions, C. T. (1904). An Advanced English Syntax. London:

Routledge & Kegan Paul.

Orr, J. (1962). Old French and Modern English Phrasing. Oxford:

Blackwell.

Partee, B. Hall (1970). Negation, conjunction, and quantifiers.

FL 6. 153-65.

Paul, H. (1886). Principien der Sprachgeschichte, 2nd edn.

Halle: Niemeyer.

Pedersen, H. (1906). Neues und nachtragliches, I: Exegetische

und syntaktische fragen. KZ 40. 129-73.

Perlmutter, D. M. (1970a). On the article in English. In

[Bierwisch, M. & Heidolph, K. E. (eds.), 233-48.

(1970b). The two verbs 'begin'. In Jacobs, R. A. & Rosenbaum,

P.5. (eds.), 107-19.

Planudes, Maximus: see Bachmann, L. (ed.), 1-166

Pontoppidan-Sjövall, K. (1964). Categories of content and form.

SL 17. 65-93.

Porzig, W. (1934). Wesenhafte Bedeutungsbeziehungen. BGDSL 58.

70-97.

Postal, P. M. (1966a). On so-called 'pronouns' in English.

MSLL 19. 177-206.

(1966b). Review of Longacre (1964). IJAL 32. 93-8.

(1970a). On the surface verb 'remind'. Linguistic Inquiry 1.



37-120.

(1970b). The method of universal grammar. In Garvin, P.L. (ed.), Method and Theory in Linguistics, 113-31. The Hague: Mouton.

(1971). Cross-over Phenomena. New York: Holt, Rinehart & Winston.

Pott, A.-F. (1836). Etymologische Forschungen auf dem Gebiete der indo-germanischen Sprachen, II. Lemgo.

(1873). Unterschied eines transitiven und intransitiven nominativs. KB 7. 71-94.

Poutsma, H. (1926). A Grammar of Late Modern English, II: Parts of Speech, II. The Verb and the Particles. Groningen: Noordhoff.

(1928). A Grammar of Late Modern English, I: The Sentence, 1, 2nd edn. Groningen: Noordhoff.

Prost, R. P. A. (1956). La langue sonay et ses dialectes. Dakar: Institut Francais d'Afrique Noire.

Quirk, R. & Wrenn, C. L. (1955). An Old English Grammar. London: Methuen.

Ramamurti, G. V. (1931). A Manual of the So:ra: (or Savara) Language. Madras.

Redden, J. E. (1966). Walapai II: morphology. IJAL 32. 141-63.

Reibel, D. A. & Schane, S. A. (eds.) (1969). Modern Studies in English. Englewood Cliffs, N. J.: Prentice-Hall.

Reich, P. A. (1969). The Finiteness of Natural Language.

(Linguistic Automation Project Report.) New Haven, Conn.: Yale University

- Robertson, J. M. (ed.) (1905). Philosophical Works of Francis Bacon. London: Routledge.
- Robins, R. H. (1966). The development of the word class system of the European grammatical tradition. FL 2. 3-19.
- Robinson, J. J. (1970a). Dependency structures and transformational rules. Lg 46. 259-85.
- (1970b). Case, category and configuration. JL 6. 57-80.
- Roerich, R. de (1958). Le parler de l'Amdo. (Serie Orientale Roma, XVIII.) Roma: Istituto Italiano per il Medio e Estremo Oriente.
- Rosen, H. B. (1959). Die Ausdruckform für 'Veräusserlichen' und 'Unveräusserlichen Besitz' im Frühgriechischen. Lingua 3. 264-93.
- Rosenbaum, P. S. (1967a). Phrase structure principles of English complex sentence formation. JL 3. 103-18.
- (1967b). The Grammar of English Predicate Complement Constructions. Cambridge, Mass.: M.I.T. Press.
- Ross, J. R. (1969a). Auxiliaries as main verbs. In Todd, W. (ed.), 77-102.
- (1969b). Adjectives as noun phrases. In Reibel, D. A. & Schane, S. A. (eds.), 352-60.
- (1970a). Gapping and the order of constituents. In Bierwisch, M. and Heidolph K. E. (eds.).
- (1970b). On declarative sentences. In Jacobs, R. A. & Rosenbaum, P. S. (eds.).
- Salmon, V. (1969). Review of Chomsky (1966). JL 5. 165-87.
- Sampson, G. (1969). Towards a linguistic theory of reference.

(Unpublished.)

- Sandfeld, K. & Olsen, H. (1936). Syntaxe roumaine I: Emploi des mots à flexion. Paris: Droz.
- Sapir, E. (1917a). Review of Uhlenbeck (1916a). IJAL 1. 82-6.
- (1917b). Review of Uhlenbeck (1916b). IJAL 1. 86-90.
- (1922). The Takelma language of southwestern Oregon. In Boas (ed.) (1922), 1-296.
- Sapir, E. & Swadesh, M. (1932). The Expression of the End-point Relation in English, French and German. (Language Monograph 10.) Baltimore, Md.: Linguistic Society of America.
- Sastri, M. I. (1968). Prepositions in 'Chemical Abstracts'. Linguistics 38. 42-51.
- Saumjan, S. K. (1965). Outline of the applicational generative grammar for the description of language. FL 1. 189-222.
- Sauvageot, A. (1951). Esquisse de la langue hongroise. Paris: Klincksieck.
- (1953). Caractère ouraloïde du verbe eskimo. BSL 49. 107-21.
- Schane, S. A. (1969). A theory of natural phonological rules. (Paper read at the UCLA conference on Historical Linguistics in the Perspective of Transformational Theory).
- Scheuriweghs, G. (1959). Present-day English Syntax. London: Longmans.
- Schmitt, A. (1956). Der nominale Charakter des sogenannten Verbuns der Eskimosprache. KZ 73. 27-45.
- Schuchardt, H. (1896). Über den passiven Charakter des Transitivs in den kaukasischen Sprachen. SbAWW(PH) 133. 1-90.

- (1905-6). Über den aktivischen und passivischen Charakter des Transitivity. IF 18, 528-31.
- (1921). Possessivisch und passivisch. SbPAW 651-62.
- (1922): see Spitzer (ed.).
- Sebeok, T. A. (1946). Finnish and Hungarian Case Systems: Their Form and Function. Stockholm: Acta Instituti Hungarici Universitatis Holmiensis, Series B: Linguistica, 3.
- (ed.) (1966). Current Trends in Linguistics, 3: Theoretical Foundations. The Hague: Mouton.
- Sebeok, T. A. & Ingemann, F. J. (1961). An Eastern Cheremis Manual. Bloomington, Indiana and The Hague: Indiana University and Mouton.
- Sechehaye, A. (1926). Essai sur la structure logique de la phrase. Paris: Champion.
- Sedláček, K. (1968). Khongs and its grammaticized usage in Modern Written Tibetan. ZDMG 118. 367-72.
- Setälä, E. N. (1926). Suomen Kielen Lauseoppi, 11th ed. Helsinki.
- Seuren, P. A. M. (1969). Operators and Nucleus: A Contribution to the Theory of Grammar. (Cambridge Studies in Linguistics 2.) London: Cambridge University Press.
- Sgall, P. (1967). Functional sentence perspective in a generative description. PSML 2. 203-25.
- Sgall, P. & Hajičová, F. (1970). A 'functional' generative description (background and framework). PBML 14. 3-38.
- Simko, J. (1957). Word-Order in the Winchester Manuscript and in William Caxton's Edition of Thomas Malory's Morte Darthur



- (1485) - A Comparison. Halle: Niemeyer.
- Small, G. W. (1924). The Comparison of Inequality. Baltimore, Md.: The Johns Hopkins University.
- Sommerfelt, A. (1937). Sur la notion du sujet en géorgien. Mélanges offerts à J. van Ginneken, 183-5. Paris: Klincksieck.
- Sonnenschein, E. A. (1927). The Soul of Grammar. London: Cambridge University Press.
- Sørensen, H.-C. (1949). Contribution à la discussion sur la théorie des cas. Recherches Structurales (TCLC 5). 123-33.
- Southworth, F. C. (1967). A model of semantic structure. Lg 43. 342-61.
- Spitzer, L. (ed.) (1922). Hugo Schuchardt Brevier. Halle: Niemeyer.
- Staal, J. F. (1967a). Some semantic relations between sentoids. FL 3. 66-88.
- (1967b). Word Order in Sanskrit and Universal Grammar. (Foundations of Language Supplementary Series 5.) Dordrecht: Reidel.
- Steinthal, H. (1863). Geschichte der Sprachwissenschaft bei den Griechischen und Römern. Berlin: Dümmler.
- Stevenson, C. H. (1970). The Spanish Language Today. London: Hutchinson.
- Summers, J. (1863). A Handbook of the Chinese Language, I & II. Oxford: Oxford University Press.
- Sugden, H. W. (1936). The Grammar of Spenser's Faerie Queen. (Language Dissertation, 22). Philadelphia, Md.: Linguistic Society of America.

Kimberly & J. K. Bouché

- Sunden, K. F. (1916). The Predicational Categories in English,  
and A Category of Predicational Change in English. (Uppsala  
Universitets Årsskrift (1918), I.) Uppsala: A.-B.  
Akademiska Bokhandeln.
- Svartvik, J. (1966). On Voice in the English Verb. The Hague:  
Mouton.
- Swanton, J. R. (1911). Tlingit. In Boas (ed.) (1911), 159-204.  
(1929). A sketch of the Atakapa language. IJAL 5. 121-49.
- Tagliavini, C. (1937). Osservazioni sull'ergativo georgiano.  
Mélanges offerts à J. van Ginneken, 187-92. Paris: Klincksieck.
- Tauli, V. (1966). Structural Tendencies in Uralic Languages.  
The Hague: Mouton.
- Taylor, F. W. (1953). A Grammar of the Adamawa Dialect of the  
Fulani Language, 2nd edn. London: Oxford University Press.  
(1959). A Practical Hausa Grammar, 2nd edn. London:  
Oxford University Press.
- Tesnière, L. (1959). Éléments de syntaxe structurale. Paris:  
Klincksieck.
- Thalbitzer, W. (1930). The absolute and the relative in Eskimo.  
A Grammatical Miscellany offered to Otto Jespersen on his  
Seventieth Birthday, 319-29. Copenhagen and London: Levin  
& Munksgaard and Allen & Unwin.
- Theban, L. (1968). Perspectiva liniară a propozițiilor trimembre.  
SCL 19. 307-15.  
(1969). Review of Staal (1967b). RRLing 14. 504-10.
- Theban, M. & Theban, L. (1969). Propoziția romanică și  
universalile sintactice. SCL 20. 55-62.

- Thorne, J. P. (1966). English imperative sentences. JL 2. 69-78.
- Tobler, A. (1905). Mélanges de grammaire française, 2nd edn., trans. M. Kuttner. Paris: Picard.
- (1921). Vermischte Beiträge zur französischen Grammatik, I, 3rd edn. Leipzig: Hirzel.
- Todd, W. (ed.) (1969). Studies in Philosophical Linguistics, I. Evanston, Ill.: Great Expectations.
- Tooke, J. Horne (1798-1805). Epea pteroenta, or The Diversions of Purley. London. (Reprinted as vol. 127 in English Linguistics 1500-1800. Menston: The Scholar Press.)
- Trabalza, C. (1908). Storia della Grammatica Italiana. Milano: Ulrico Hoepli.
- Traugott, E. (Closs) (1965). Diachronic syntax and generative grammar. Lg. 41. 402-15.
- Traugott, E. (1969a). Toward a grammar of syntactic change. Lingua 23. 1-27.
- (1969b). Simplification versus elaboration in syntactic change. (Paper read at the UCLA Conference on Historical Linguistics in the Perspective of Transformational Theory.) 287-304.
- Traugott, E. & Waterhouse, J. (1969). Already and yet: A suppletive set of aspect-markers? JL 5. 287-304.
- Troubetzkoy, N. (1929). Notes sur les désinences du verbe dans les langues tchéco-slovaques. BSL 29. 153-71.
- Uhlenbeck, C. C. (1901). Agens und Patiens im Kasussystem der indogermanischen Sprachen. IF 12. 170-1.
- (1907a). Karakteristiek der baskischen Grammatica. VMKAW(L) 4,

8. 4-42.
- (1907b). On Finck, 1907. KZ 41. 400.
- (1916a). Het passieve Karakter van het Verbum transitivum of van het Verbum actionis in Taalen van Noord-Amerika. VMKAW(L) 5, 2. 187-216.
- (1916b). Het identificeerend Karakter der possessieve Flexie in Taalen van Noord-Amerika. VMKAW(L) 5, 2. 345-71.
- (1948). Le langage basque et la linguistique générale. Lingua 1. 59-76.
- Uhliřová, L. (1966). Some aspects of word order in categorial and transformational grammars. PSML 1. 159-64.
- Vachek, J. (ed.) (1964). A Prague School Reader in Linguistics. Bloomington, Indiana: Indiana University Press.
- Vaillant, A. (1936). L'ergatif indo-européen. BSL 37. 93-108.
- Valin, R. (1964). Petite introduction à la psychomécanique du langage. Quebec: Presses de l'Université Laval.
- Vasiliu, L. (1968). Some methodological remarks concerning a semantics of prepositions. RRLing 13. 541-9.
- Velten, H. V. (1931). On the origin of the categories of voice and aspect. Lg 7. 229-41.
- (1932a). The accusative case and its substitute in various types of language. Lg 8. 255-70.
- (1932b). Sur l'évolution du genre, des cas et des parties du discours. BSL 33. 205-23.
- (1962). On the function of French de and à. Lingua 11. 449-52.
- Vendler, Z. (1967). Linguistics in Philosophy. Ithaca, N. Y.: Cornell University Press.



- Vendryes, J. (1921). Le langage. Paris: La renaissance du Livre.
- (1932). Sur les verbes de mouvement en indo-européen. IL 2. 21-5. (Reprinted in Choix d'études linguistiques et celtiques (1952), 127-31. Paris: Klincksieck.
- (1937). Sur l'emploi de l'auxiliaire 'avoir' pour marquer le passé. Mélanges de linguistique et de philologie offerts à J. van Ginneken, 85-92. Paris: Klincksieck.
- Verhaar, J. W. M. (ed.) (1968). The Verb 'Be' and its Synonyms, 2. (Foundations of Language Supplementary Series 6.) Dordrecht: Reidel.
- Vinay, J.-P. & Darbelnet, J. (1958). Stylistique comparée du français et de l'anglais. Paris: Didier.
- Vinson, J. (1903). Manuel de la langue tamoule. Paris: Leroux.
- Visser, F. T. (1963). An Historical Syntax of the English Language, I: Syntactical Units with One Verb. Leiden: E. J. Brill.
- Visser, F. T. (1969). An Historical Syntax of the English Language, III: Syntactical Units with Two Verbs, II. Leiden: E. J. Brill.
- Vogt, H. (1938). Esquisse d'une grammaire du géorgien moderne. NTS 10. 5-188.
- (1944). Le système des cas en ossète. AL 4. 17-41.
- (1949). L'étude des systèmes des cas. Recherches structurales (TCLC 5). 112-22.
- Wackernagel, J. (1920). Vorlesungen über Syntax, I. Basel.

- Wagner, K. H. (1968). Verb phrase complementation: A criticism. JL 4. 89-91.
- Walch, M. L. (1970). Passives without agentives. (Unpublished).
- Weinreich, U. (1966). Explorations in semantic theory. In Sebeok, T. (ed.), 395-477.
- Westermann, D. (1930). A Study of the Ewe Language. London: Oxford University Press.
- Whitney, W. D. (1893). On recent studies in Hindu Grammar. AJPh 14. 171-97.
- Whorf, B. L. (1956). Language, Thought and Reality. New York: Wiley.
- Wickman, B. (1955). The form of the object in the Uralic Languages. Uppsala: Almqvist & Wiksell.
- Wijk, N. van (1902). Der nominale Genitiv Singular im Indogermanischen in seinem Verhältnis zum Nominativ. Zwolle.
- Winkler, H. (1889). Weiteres zur Sprachgeschichte. Berlin: Dümmler.
- Worth, D. S. (1964). Ob otobraženii linejnyx otnošenij v poroždajuščix model jax jazyka. VJa 3. 46-58.
- Wüllner, F. (1827). Die Bedeutung der sprachlichen Casus und Modi. Münster.
- Wundt, W. (1900). Völkerpsychologie, I: Die Sprache, II. Leipzig: Wilhelm Engelmann.
- Yamakawa, K. (1958). On the construction 'have (or get) + object + past participle'. Anglica 3. 164-96.
- Zandvoort, R. W. (1964). A Handbook of English Grammar, 9th edn. Groningen: Wolters.

Zieglschmidt, A. J. F. (1930a). Der Untergang des einfachen  
Präteritums in verschiedenen indogermanischen Sprachen.

Curme Volume of Linguistic Studies, 169-73. Baltimore, Md.:

Linguistic Society of America.

Zieglschmidt, A. J. F. (1930b). Concerning the disappearance of  
the simple past in various Indo-European languages. Pho 9.  
153-7.

Zubaty, J. (1906). Die 'man'-sätze. KZ 40. 478-520.

Zwicky, A. M. (1968). Naturalnes arguments in syntax. Papers  
from the Fourth Regional Meeting, Chicago Linguistic Society,  
94-102. Chicago, Ill.: University of Chicago.